JULY 1954

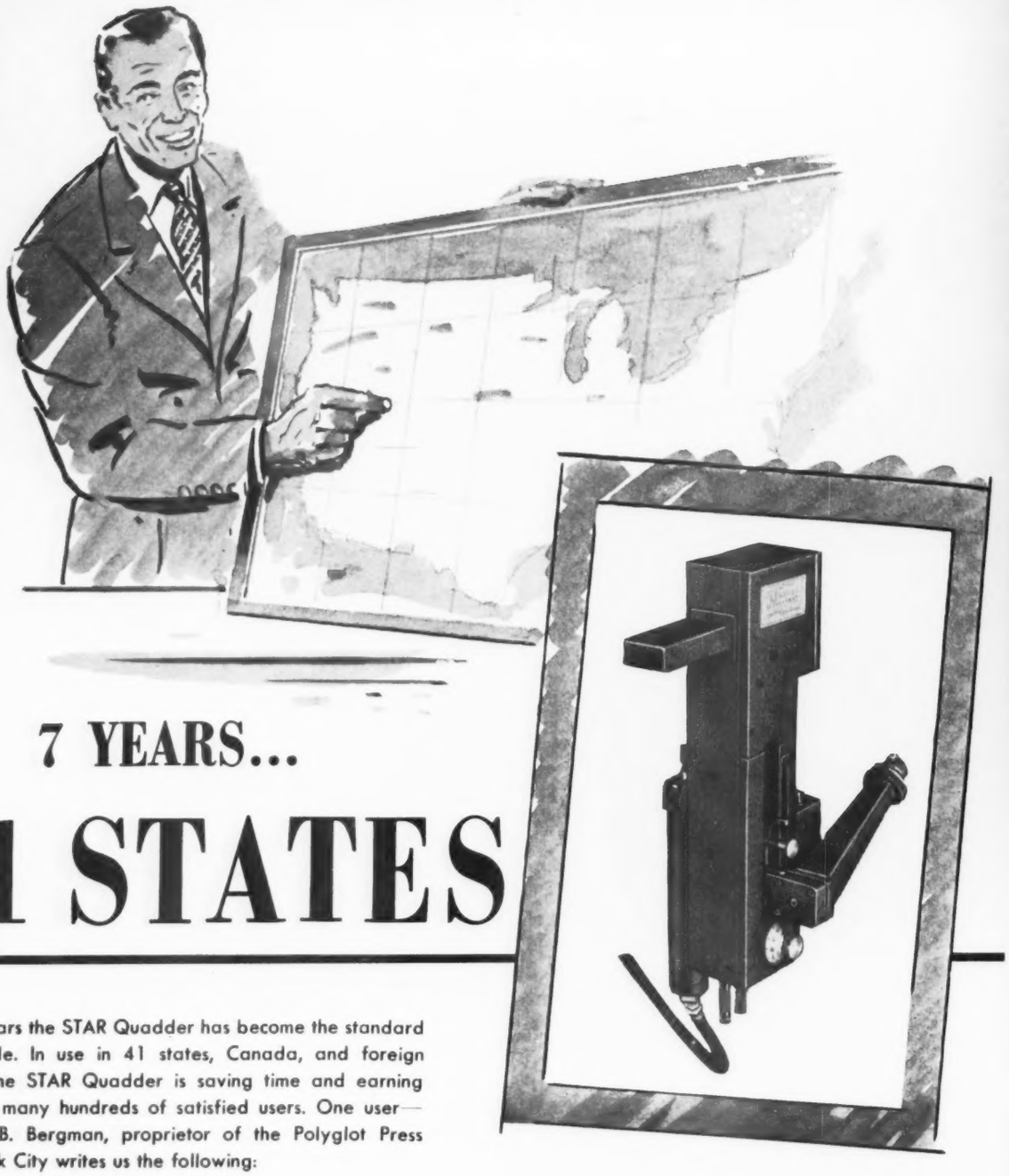
PRINTING EQUIPMENT Engineer

PLEASE ROUTE THIS COPY TO

Manager	Pressroom Foreman
Production Mgr.	Bindery Foreman
Plant Supt.	Mailing Foreman
Platemaking Foreman	Maintenance Supt.
Composing Foreman	Purchasing Agt.

For filing, please return to

AN INDUSTRY-WIDE TECHNICAL PUBLICATION



7 YEARS...

41 STATES

In just 7 years the STAR Quadder has become the standard in the trade. In use in 41 states, Canada, and foreign countries, the STAR Quadder is saving time and earning money for many hundreds of satisfied users. One user—Mr. Peter B. Bergman, proprietor of the Polyglot Press in New York City writes us the following:

"I do not have the time or the patience to write eulogies, but I have to tell you how pleased I am with our new Star Quadder. It is saving us time and money . . ."

This is but one example of the STAR Quadder's widespread popularity.

Find out how the STAR Quadder can fit into **your** shop. Write today for new descriptive folder containing full details.

Precision TRADE ★ MARK Parts

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COLOR REGISTER MADE EASY!

STA-HI MASTER MATCHER

Any stereotype craftsman can now register newspaper color in a hurry, with scientific accuracy, by using this precision Sta-Hi equipment.

This close register is effected right in the page mats, before plates are cast!

These machines are in production now. . . If your order is placed promptly, delivery can be made in approximately 90 days.

Write, wire or phone for complete information.

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STA-HI®
...your best buy

STA-HI MASTER TRIMMER

Today — COLOR

One Example of Equipment for Variable Color Page Location

The above diagram shows a press equipped to enable any two adjacent units to print 4 colors on either side of one web and allowing the turning over of one-half of the web when desired to vary the color page location.

FOR more than 60 years Scott has been designing and building newspaper color printing equipment. The fruits of this continuous development are readily apparent in the many superior mechanical features exclusive with Scott Presses.

The illustration above is a splendid example of the simplicity in design and convenience of operation of Scott Reversible Drives — a simple flip of a lever outside the gear box does the trick!

All gears are always in correct mesh. The flexibility of Scott Press units in combination, to enable wide selection of color page location, derives from long experience in the development of color press equipment.

And so it goes, through a long list of features, with sound mechanical design and sturdy construction, assuring long, satisfactory service and quality printing from every unit of Scott equipment.

★ *A New Fully Descriptive Brochure is YOURS for the asking* ★

Buy with CONFIDENCE - - - Buy SCOTT

WALTER SCOTT & CO., INC.

PLAINFIELD, NEW JERSEY

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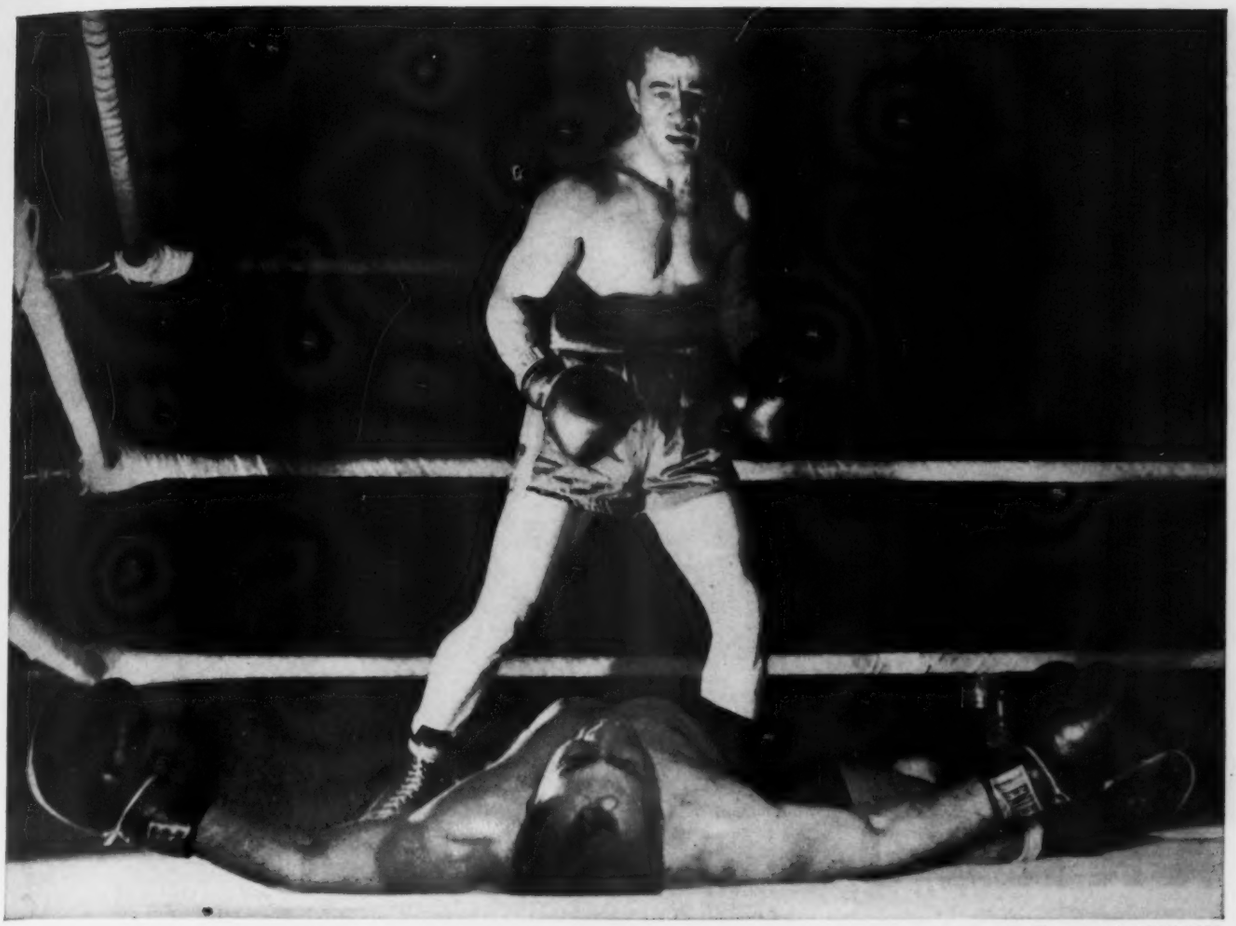

Photograph by DAVID BIER.

Simple 3-step direct printing with Scan-a-gravings

IMPROVES REPRODUCTION QUALITY

You can get sharp, clear reproduction of prize-winning pictures like this, and capture the reader's attention and interest, with direct-printed Scan-a-gravings. Scan-a-gravings are electronically-engraved halftones that can be curved to mount directly on the stereos—no details or time are lost through the matting and stereotyping process.

Mats are rolled with blanks inserted in the page form, and the plastic halftones are mounted securely on the stereo with double-faced Scotch tape. There is no waiting for cuts when you use Scan-a-gravings.

•If you need faster and better quality reproduction, Scan-a-gravings can help you. For complete information write *Fairchild Camera and Instrument Corporation, Robbins Lane, Syosset, Long Island. Dept. 100-80E.*

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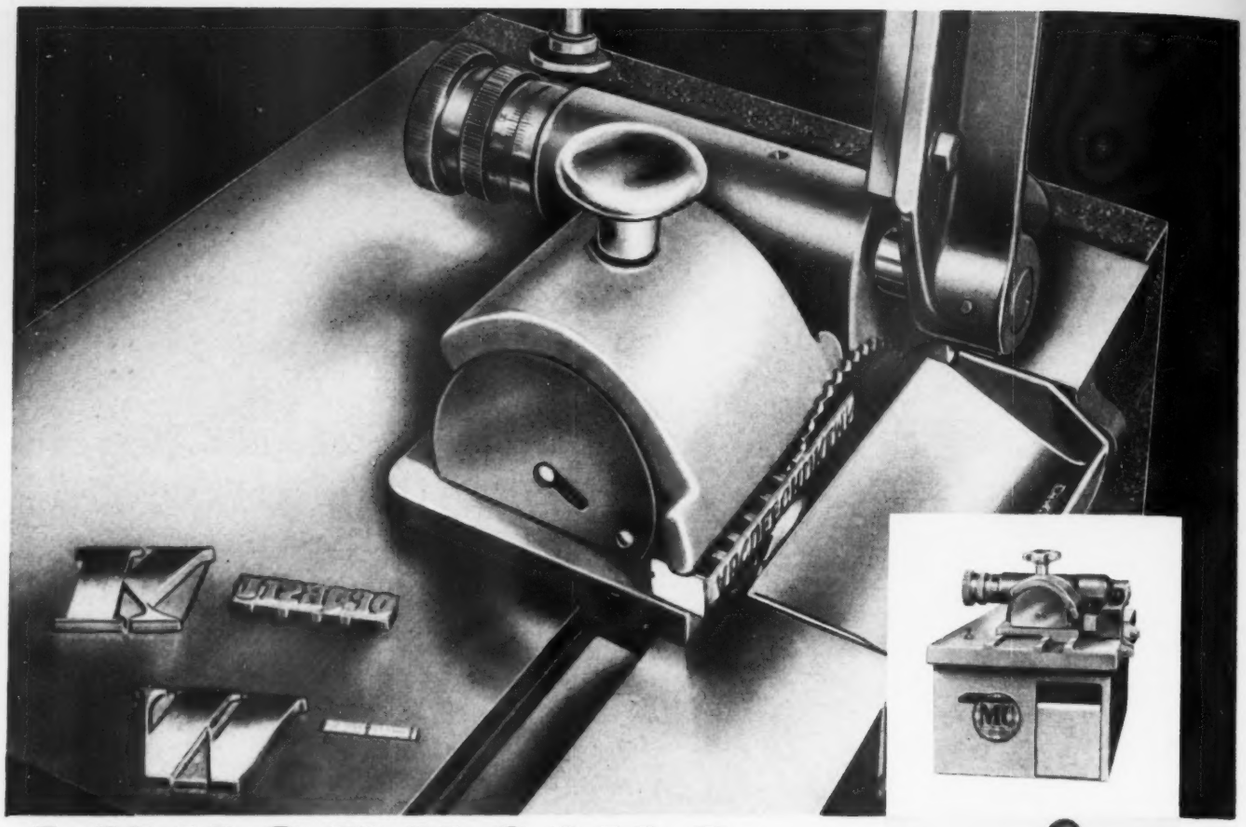
SCAN-A-GRAVER



ANNOUNCING...

New MORRISON SLUG STRIPPERS in BENCH and CABINET Models

Save up to 75% of Compositors' Time . . . Plate Corrections, Special Composition, Angle Lines added WITHOUT MORTISING

Now, with the development of the new BENCH Model, even the smaller plant can take advantage of the Morrison Slug Stripper time-savings! If you use zincs, stereos, electrotypes or other plated materials, corrections, angle lines of composition, prices, key numbers, captions, and similar plate changes are *simple* — without mortising or cutting your base plate. With a Morrison Slug Stripper, you merely cut the letter characters from line-composing or Ludlow slugs, or type, rules and borders — to height needed — then tack, cement or tape them into position. There's no time wasted in mortising or cutting the base plate! It's a great time saver!

New MORRISON CABINET MODEL SLUG STRIPPER

Complete self-contained unit with built-in waste receptacle, micrometer gauge, slug-holding clamp, lighting fixture, saw blade and ¼ H.P. A.C. motor. Trims to any height — from 16-gauge, 0.065" thick for metal-mounted photo-engravings, to 0.105" and 0.152" for electros and shell stereo casts.

New MORRISON BENCH MODEL SLUG STRIPPER

Priced and designed to meet minimum requirements. Can be placed on any suitable stand or work surface, using only 11" x 19" of bench space. All working parts are identical and interchangeable with the Cabinet Models. Equipment includes: Slug-holding Clamp, Micrometer Gauge, Saw Blade, Chip Drawer, and ¼ H.P. 115 volt, 60 cycle, single phase motor. Handles slugs ranging from 1 point to 72 points, and from single character up to 30 picas in length. An important time-and-labor-saver at surprising low price.

Prove Morrison Slug Stripper versatility and time-saving in your plant! Write today for latest bulletin and prices.

Other Morrison Equipment Includes: Saw Trimmers, Router and Type High Planers, Plate Bevelers, Strip Material Cabinets, Waste Receptacles, Universal Saw Blades, Router Bits, Jig Saw Blades.

Symbol of Operating Economy

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PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

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PRINTING EQUIPMENT Engineer

July 1954

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

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EDITORIAL STAFF

MacD. Sinclair, Editor

Adam Henry Reiser
Associate Editor

Edward H. Owen
Assistant Editor

BUSINESS STAFF

Don Will, Publisher

William L. Osborn, Eastern Advertising Representative, 1712 Grand Central Terminal, New York 17, New York. Phone: MUrray Hill 6-5980.

Melburn O. Simmons, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone: DEarborn 2-6467.

George Gell, Central District Advertising Representative, 1276 W. Third St., Cleveland 13, Ohio. Phone: PRospect 1-0088.

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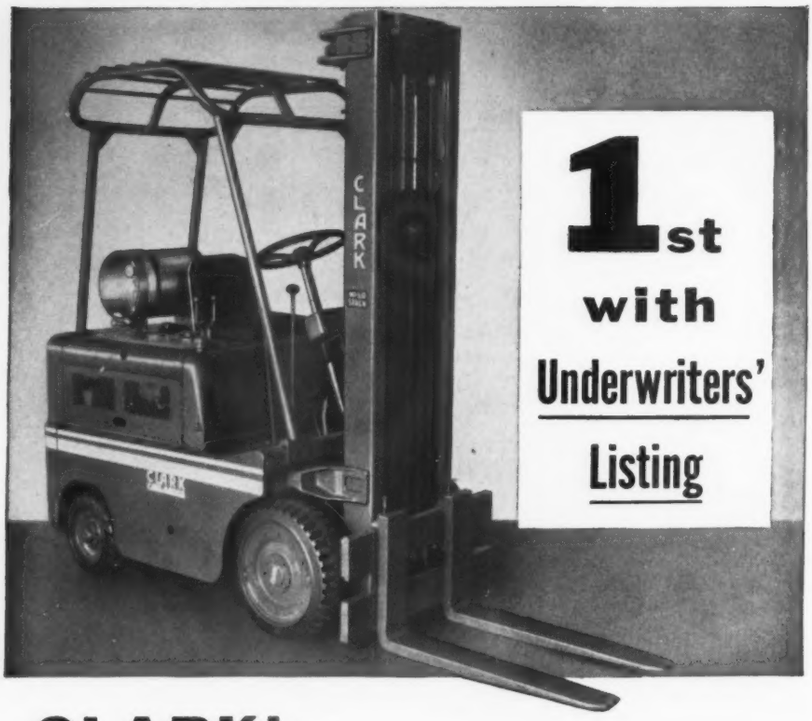

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1. Greatly reduces engine maintenance:

Eliminates unburned carbon deposits and crankcase dilution. Eliminates fuel pump and complicated carburetor adjustments.

2. Eliminates obnoxious exhaust fumes:

L.P.-Gas provides almost perfect combustion, excellent for indoor operations.

3. Provides safe, efficient operation:

Vacuum ignition switch is interlocked with fuel line and manifold, impossible to spill fuel or load-up engine.

High compression head (8.5 to 1) gives maximum economy and power from high octane L.P. Gas.

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Now you can have the advantages of liquified petroleum gas-powered (butane, propane) materials handling, with complete safety. For details, call your local Clark dealer, listed under "Trucks, Industrial" in the Yellow Pages. Or send the coupon for specifications.

*4000 lb. capacity, available with standard shift, Hydratork or Dynatork

Industrial Truck Division CLARK EQUIPMENT COMPANY
Battle Creek 151, Michigan ☐ Send details on LPG truck

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Equipment and Supplies

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, O.

Combination Arc Lamp and Vacuum Printing Frame

A carbon arc lamp and vacuum printing frame have been combined into one cabinet unit by the nuArc Company for making conventional and pre-sensitized offset plates. Called the Rapid Printer, sponsor claims the unit will produce a pre-sensitized printing plate in 20 to 90 sec. and has a burning time in excess of

4 min. or longer if necessary. Controls are automatic or manually operated and the reflective surface is 525 sq. in. in size. The blanket frame, which will accommodate all types of pre-sensitized offset plates, measures 17¼ in. by 25 in. The manufacturer states that the unit's Multi-V filter system dispenses with fumes and odors which develop during operation. Provision is made in the cabinet unit for the storage of plates. The Rapid Printer measures 21 in. by 28½ in. by 40 in. high. The vacuum frame is hinged with suspension springs and develops 25 lbs. of vacuum. After the vacuum pressure has built up, the frame may be lifted and plate and film position inspected before exposure if desired. Other features of the Rapid Printer include a heavy duty transformer, 110 v., a.c. motor, pump and pressure gauge. Please mention PEE No. 184 when requesting more details.

Dust Removing Brushes

Staticmaster brushes are designed for cleaning surfaces of dust, lint or any substance held to a surface by static attraction, states Gardner Laboratory, Inc., in a recently issued bulletin. The brushes are of special use to lithographers, photo-engravers and photographers for cleaning negatives, film holders, slide mounts, enlargers, printers, etc. Sponsor claims that

(Continued on Page 8)

Unparalleled ink distribution with **THREE FORM ROLLERS** *covering the full form.*

Dexter stream feeder separates sheets by air—no combers to mark the sheet.

Sheet transfer mechanism provides positive register at varying press speeds.

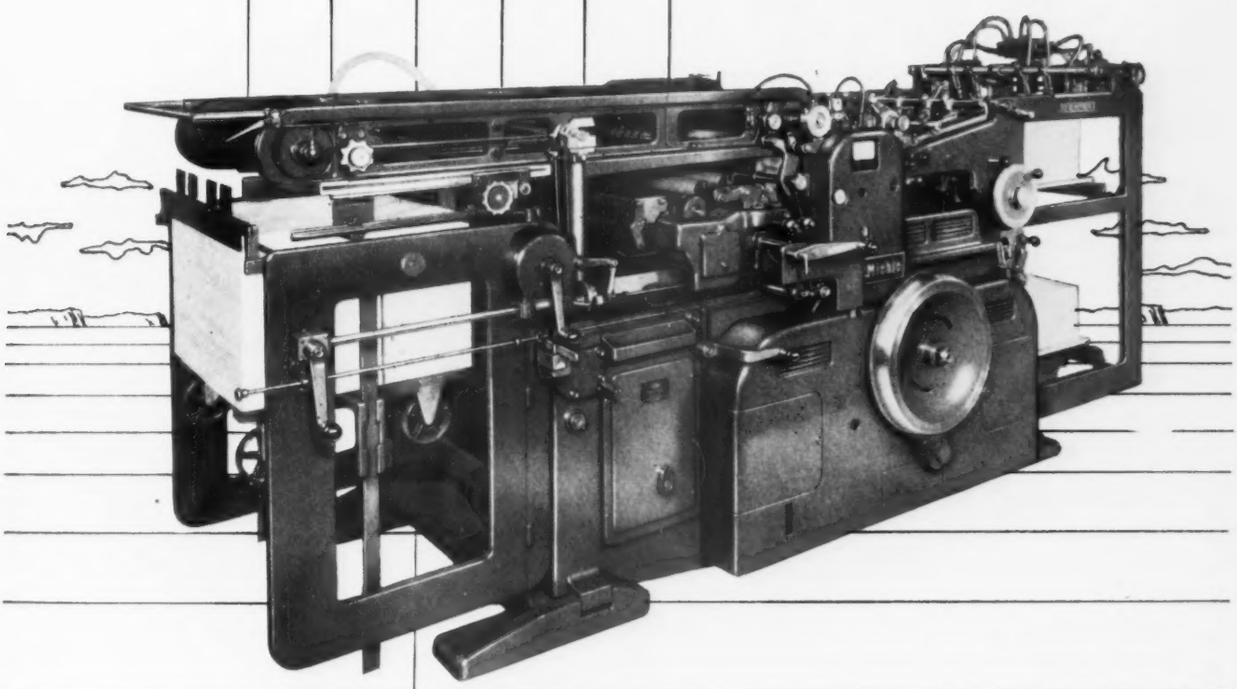
Chain delivery keeps sheets under positive control from cylinder to delivery pile.

Automatic lubrication of all main bearings saves time, prevents wear and damage.

Precision engineered, rugged construction assures firm impressional strength.

ONLY THE MIEHLE THREE ROLLER 29 LETTERPRESS

GIVES YOU ALL THESE ADVANTAGES...



Sheet Size 22" x 28"
Speeds up to 4500

Get more and better production with the Miehle 29 Three Roller Letterpress.
WRITE TODAY FOR COMPLETE INFORMATION!

MIEHLE PRINTING PRESS AND MANUFACTURING COMPANY

Chicago 8, Illinois

Equipment & Supplies

(Continued from Page 6)

one stroke of the brush removes the attracted particles and destroys the static electricity.

The ferrule of the brush contains polonium, an ionizing agent, which emits alpha rays and immediately neutralizes any surface in close proximity. Freed of static charge, the tiniest particles of foreign matter are brushed away with the camel's hair bristles. Sponsor states that once neutralized, surfaces will not re-attract dust and lint until recharged by rubbing or handling.

Each stroke of the 1 in. wide Static-master brush covers a surface up to 1⅜ in. wide. Surfaces up to 3½ in. wide are covered by one stroke of the 3 in. wide brush. For many details, please refer to PEE No. 175 in your request.

New Paper, Inks

A line of chart paper and recording inks has been announced by officials of Minneapolis-Honeywell Regulator Co., Industrial Div. The inks are designed to carry the dye into the paper but not deeply enough to start feathering or to break through the paper fibers, sponsor states. Three colors, including a true red, a black ink suitable for blueprint reproduction, and an olive green, also are now made by the Industrial Div. Additional details may be obtained by requesting PEE No. 192.

Copi-Counter

An instrument for rapid counting of typed manuscript lines, for counting characters in a typed line or lines, for measuring columns of type, galley cuts and other dimensions of type, is the Copi-Counter.

Its sponsor, Arthur H. Nellen, jr., claims it is a precision made, double-dial indicator, graduated in inches and picas on one side and inches and agates on the other. In use, the Copi-Counter's wheel is run up the pages or columns. The length in inches or total number of typed lines is indicated on the dial. It is also claimed that use of the Copi-Counter will save time and typesetting by quick estimation of the total character count in an item or manuscript, from which the number of typed lines can be determined. Also, an edited or deleted article can be character-counted by using the instrument on each line, skipping over the deleted sections. A running character count is recorded throughout the item. When it is necessary to cut portions of a galley of type, the Copi-Counter is set at zero and run up the surplus galley to measure the amount to be deleted, then down the parts which can be deleted. When the hand returns to zero, the correct amount has been cut. A number of other uses of the Copi-Counter are given in the directions furnished with the instrument. If additional details are desired, please specify PEE No. 193.

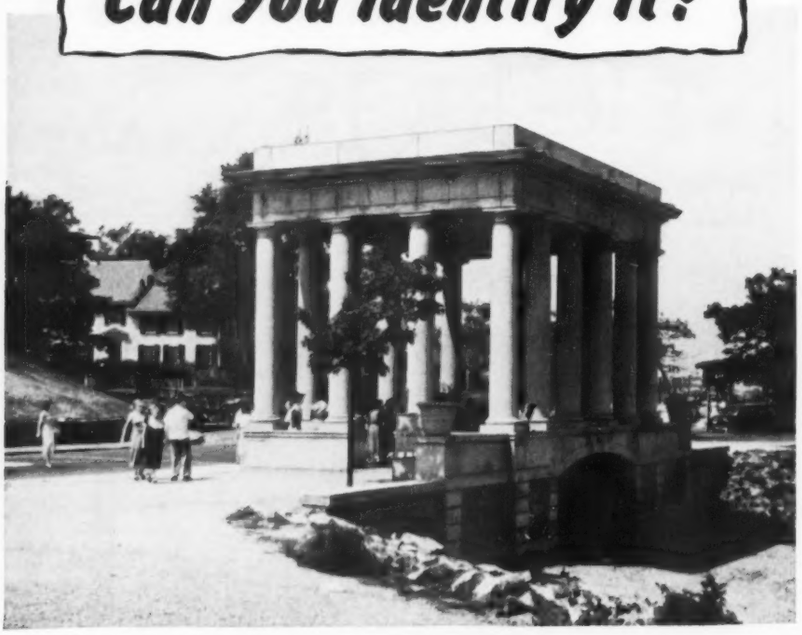
Pierce Traymaster

Speeds of up to 6000 hand gathered sheets per hr. are claimed for Traymaster, a gathering tray made by Pierce Special-

ized Equipment Co. Traymasters are aluminum trays that can be used individually, or stacked to heights and worked from a seated position using them on either or both sides. Their principle of paper separation makes it possible to pick up one sheet at a time from the stack. This method is also said to allow carbon

(Continued on Page 10)

Can You Identify It?



This pavilion in Massachusetts enshrines a rock with a famous name

In stereo work BURGESS is a famous name. Expert stereotypers across the country recognize the qualities that make BURGESS MATS far superior to other makes . . . their greater plasticity . . . smoother face . . . uniform shrinkage. Likewise, they know that BURGESS MATS, regardless of batch, are consistent in these qualities. They trust BURGESS MATS to do the job. BURGESS never let them down!

(*Plymouth Rock*)

BURGESS CELLULOSE COMPANY
Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats
Freeport, Illinois

A Laboratory Product
BURGESS Chrome MATS

HERE ARE 4 OF 13 ALL NEW "FUTURE FEATURES" FURTHER INCREASING HEIDELBERG SPEED, VERSATILITY, ACCURACY...AND PROFIT. ALL THIS AT NO ADDED COST!

1 The Heidelberg's wide range of versatility has now been increased even more with the Feed Table Drive. By means of a scale the desired lift can be set for stock from onion skin to the heaviest cardboard.

2 Quality printing demands even ink flow. This new Heidelberg feature insures perfect inking of form AUTOMATICALLY. When impression is off, ink flow stops automatically. No more over-inking, offsetting, washing of form before continuing run.

3 The ultimate in smoother, more even form inking with Heidelberg ball-bearing equipped form rollers. Assures top-quality production of solids, halftones at higher speeds. Increases life of rollers and core.

4 Allows complete and accurate pre-register of forms in the chase right in the composing room. Is quick and simple to use...cuts down idle press time...saves time and money.

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NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

Equipment & Supplies

(Continued from Page 8)

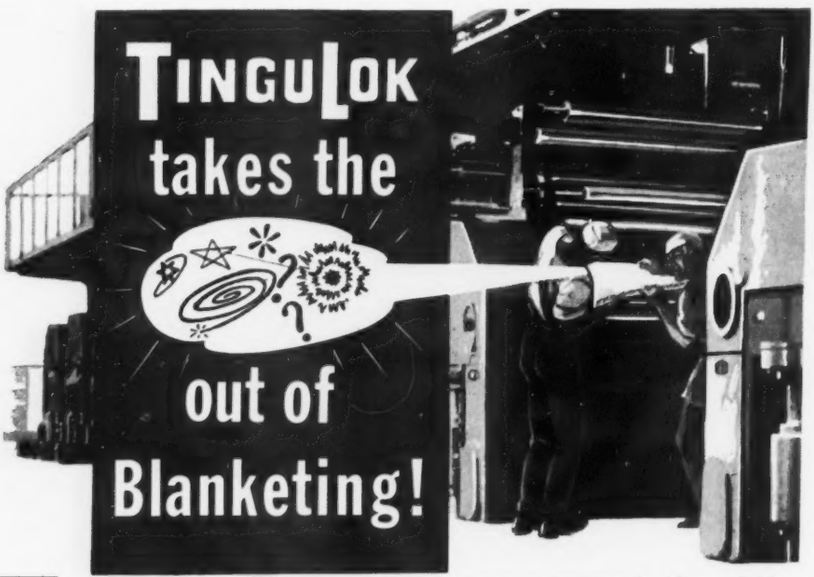
paper and tissue to be removed quickly and easily. For further information, please state PEE No. 171 in your request.

Hobby Hand Press

A combination instruction book and catalog for the CMC Supreme 3 in. by 5 in. Hobby hand press has been prepared by the Craftsmen Machinery Co. The 28 page booklet is written for young people, veterans in hospitals, paraplegics, etc., who desire to undertake printing as a hobby or to earn a limited profit. Descriptions, illustrations and specifications of equipment designed for printing small jobs are included in the catalog section. Several pages of instruction deal with how to set type, makeup of forms, lockup and press work. For information on this booklet, please mention PEE No. 170 in your request.

Rubber Plate Handbook

A rubber plate handbook on the subject of rubber printing plate usage in flexographic printing has been issued by Mosstype Corporation. In 16 illustrated pages, divided into eight chapters, is information designed to help the flexographic printer achieve higher quality printing at lower cost. The handbook is offered to flexographic printers without cost. Please state PEE No. 172 in your request.



TINGULOK (PATENT PENDING) "the most economical and the simplest system of blanketing rotary presses"

The really "hot news off the press" is about TINGULOK:

1. Hands and fingers SAFE FROM INJURY in putting on blankets!
2. Blankets put on in less time!
3. Blankets more securely attached to impression cylinders!
4. Blankets do not shift or WALK from side to side.

TO INSTALL: TINGULOK uses two reels in blanket cylinder. Can also be adapted to one reel cylinders. The old canvas flaps, if any, are removed. The TINGULOK Lead Flap is applied to the lead or pin end roll. The TINGULOK Tail Flap is put on the other reel. It is not necessary to take reels out of the press to install TINGULOK Flaps.

TO BLANKET: Simply run clipper lace wire through elements on TINGULOK Lead Flap and TINGULOK Blankets and Drawsheet. Reel in until reinforcement on Drawsheet is below opening. Wrap blankets around cylinder and run wire through lacing on tail of Drawsheet. Reel in!

It's as simple as that... no pain, no strain, and no blankety blank in blanketing! TINGULOK Flaps and Blankets are made up complete... no preparation of Blankets and Drawsheets necessary!

TINGUE-BROWN & CO.

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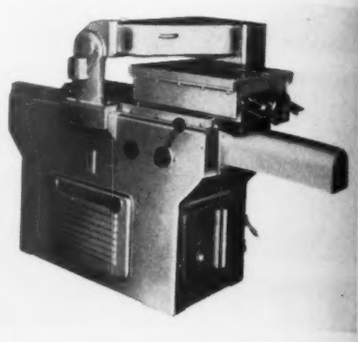
507 Bishop Street, N.W., Atlanta, Ga. ..... ATwood 3864
1227 Wabash Avenue, Chicago 5, Ill. ..... HArrison 7-0083
723 E. Washington Blvd., Los Angeles, Cal. ..... PRospect 6023

Hydraulic Shaver

A heavy duty shaver for shaving stereos, electros, metal base, plastic and wood is announced by W. H. F. Thompson, Pres., The Monomelt Co., Inc. The shaver is furnished with hydraulic drive, micrometer-controlled shaving height, a heavy duty, non-clogging cutter head, a flexible 17 finger front hold down and a table capacity of 17½ in. by 22½ in. It is also equipped with a cast iron base. Please mention PEE No. 188 in your request for further details.



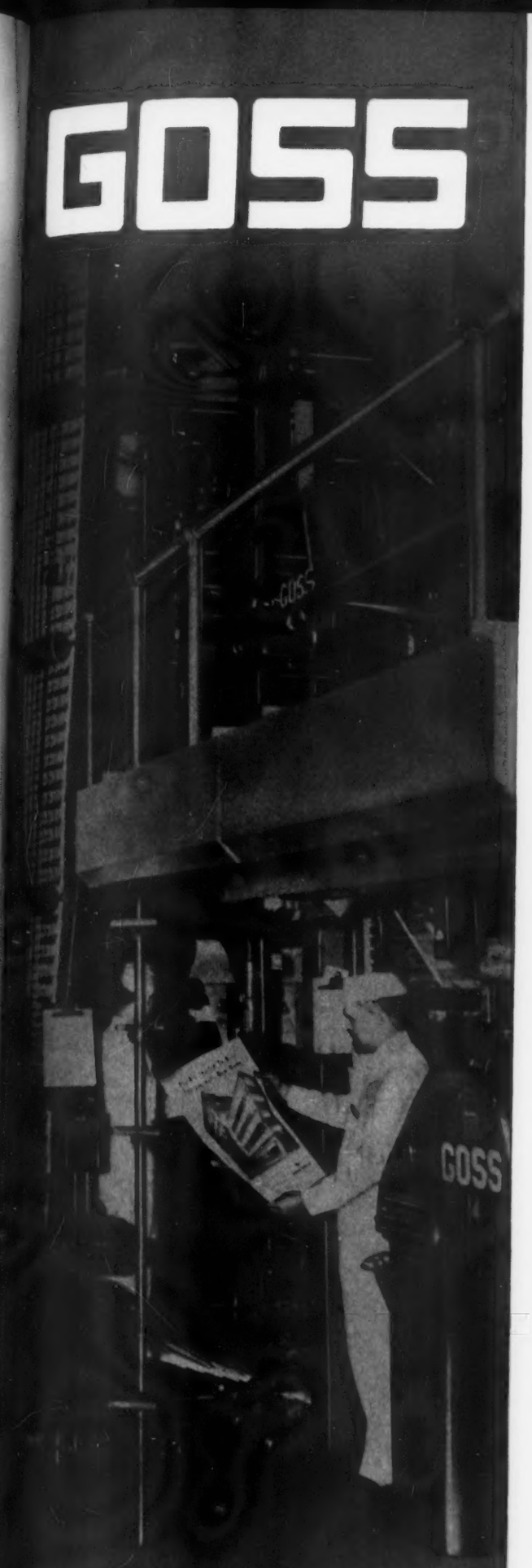
Jogging Machine

An adjustable slide jogging machine designed for receiving sheets at the delivery end of printing presses, collators, perforators, slitters and trimmers and other machines equipped with a belt delivery, has been announced by Ilva Scheinker. Sponsor states the automatic jogger is specifically designed to receive large volumes of stock direct from any of the above equipment. The adjustable back guide permits positioning for any size sheet, set or cut-off. The machine is available in a number of sizes. Please mention PEE No. 180 if further information is desired.

Ink Users Manual

A pocket manual of helpful information for pressmen on the use of printing ink is available from Gaetjens, Berger & Wirth, Inc. The 56 page manual is divided into five sections which deal with difficulties, factors affecting ink drying

(Continued on Page 12)



SERVICE

AROUND THE CLOCK

No further away than your phone

365 Days a Year • 24 Hours a Day

The Goss Company always is ready to help you in emergencies.

Someone is on duty every minute of the night and day —including Sundays and holidays—in the Parts Order Department, to give your repair parts orders immediate attention.

Each of these experienced men is intimately familiar with all models of presses, and can visualize your problem when you call. He checks the engineering drawings of *your* press, to make doubly sure that the proper parts have been specified, and he personally follows through —either getting the parts out of stock or expediting their manufacture—and then rushes them to you.

Personal attention to YOUR problems has been standard practice at the Goss Company since its founding.

Skilled, factory-trained machinists are available for emergency service anywhere, any time.

In emergencies, telephone. You will find someone ready and eager to help you. For routine assistance and for advice, write to either the Field Service Department or the Parts Order Department. Your letter will be given prompt, thorough and courteous attention, with every effort being made to supply detailed, practical information to help you obtain still better performance from presses and stereotype equipment.

Two trunk lines:

BIshop 2-2939—for emergency service, and at night and on Sundays and holidays.

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WORLD'S LARGEST MANUFACTURER OF NEWSPAPER, MAGAZINE AND ROTOGRAVURE PRESSES

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WITH BEVERIDGE MATS!

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NEW PRODUCTS DIVISION

The BEVERIDGE PAPER CO.

Indianapolis 4, Indiana

ROTOGRAVURE

PUMP TYPE CYLINDER SPOT PLATER

(Patent Pending)

SAVE COPPER • SAVE TIME

Don't grind off and replate entire cylinder to repair small damaged areas. USE STANDARD PROCESS PUMP TYPE SPOT PLATER!

COMPLETELY FILLS TYPE SECTION 1" long x ¼" wide on a rotogravure cylinder with electrolytically plated copper in 7 to 9 minutes! Base copper or Ballard shell imperfections repaired rapidly by single or successive platings! After handfinishing repaired section, there is no structural variation of copper in or around fill.

MACHINE IS A SELF-CONTAINED, PORTABLE UNIT; housed in a compact reinforced plywood carrying case. Machine consists of plater with motor driven centrifugal pump which has stainless steel impeller and lucite housing; also 6 volt rectifier; fuse protected ammeter; variable resistor amperage control; and reversing switch. Includes roll of pressure sensitive plastic tape and rubber mask for centering and taping over area to be plated.

Machine designed to use standard plating solution of copper sulphate, sulphuric acid and operates on 110 volt, AC current.

STANDARD PROCESS CORPORATION

Manufacturing Gravure Equipment & Supplies

2704 W. Roscoe Street • Chicago 18, Ill.

Equipment & Supplies

(Continued from Page 10)

time, driers, dampening control and information for corrugated board printers. Remedies are given for such common troubles as ink backing away from the fountain, bleeding, caking, chalking or powdering, color lacks snap, smearing, etc. When requesting a copy of the manual, please ask for PEE No. 178.

Power Operated Test Press

A power operated test press designed for quality proofing or short runs with hairline register, has been announced by Vandercook & Sons, Inc. To be known as the Vandercook Power 219, sponsor claims the press can be operated at speeds up to 500 i.p.h. Both the ink distribution system and the cylinder carriage are power driven. The press is operated by means of hand and foot controls.

The press is equipped with a control which permits the cylinder to travel over a long and short printing stroke, depending upon the size of the plate or form being proved. To control the movement of the cylinder carriage, either forward or backward, or to jog, the press is equipped with two levers located within reach of the operator's hand. The power is turned on and off by means of one of these levers.

Two foot pedals are also provided, one for opening the grippers and automatically putting the press on impression, and the other to set the cylinder in motion.

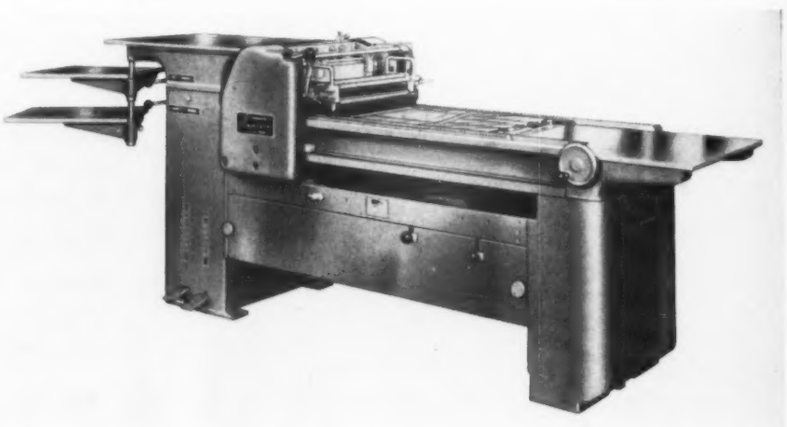
The adjustable bed on the press makes it possible for the operator to prove plates of various thicknesses without the necessity of changing the plate base. This feature also permits rapid impression changes on the plate, thereby helping to eliminate the use of underlays. The bed adjustment range is 0.240 in. An adjustment in the bed is made by turning a handwheel on the side of the press. The amount of movement is shown on a dial calibrated in 0.001 in. which is located just inside the bed bearer.

Additional information on this press may be obtained by mentioning PEE No. 176 in your request.

Magic Matrix Black

Announcement has been made by the Clarity Company of Magic Matrix Black, a cold chemical process for contrasting linecasting matrices in the shop. Sponsor states individual matrices can be touched up in one or two seconds and an entire font can be contrasted in minutes to apply the solution. No special equipment is required. The solution from the bottle is applied to the matrix reference surface with a small cotton swab. For convenience, the matrices are racked on a cleaning stick when contrasting an entire font. When a few matrices are being

(Continued on Page 70)



The Vandercook Power 219 test press with power driven ink distribution system and cylinder carriage. The press is designed for proofing or short run operations at speeds of up to 500 i.p.h. The bed is adjustable over a range of 0.240 in.

In America's Three Largest Cities

*More than 24 Million People

Every Sunday . . . in America's three great cities . . . more than 24 million people read a newspaper printed on presses **driven and controlled by Cline-Westinghouse electrical equipment.**

In New York, Chicago and Los Angeles it is estimated that about 35 million people read Sunday newspapers. And about three-fourths of them read newspapers in the production of which Cline equipment plays an important part.

This preference for Cline equipment, so pronounced among the biggest newspapers, carries right through the country, in fact, world-wide. From the Atlantic to the Pacific and from the Gulf to Canada, with newspapers of small as well as large circulation, Cline leads the field.

* From statistics of Editor & Publisher and Standard Rate and Data . . . using an average of 2 readers per newspaper.

Cline-Westinghouse

Drives and Controls

Cline

ELECTRIC MANUFACTURING COMPANY
3405 WEST 47TH STREET, CHICAGO 32
Los Angeles 17, California • New York 17, N. Y.

ENGINEERING REPORTS:

Oakland Tribune's new G-E electronic press drive accelerates smoothly, reduces web breaks

Powered through electronic control, 10 G-E d-c drive motors rolled the Oakland Tribune's new Hoe Press for the first time early in March, 1953.

A G-E Service Engineer worked closely with the ***Tribune*** and on the day following final mechanical adjustments, March 13, the first edition came off this 50,000 pph press. Since that time it has been in continuous operation.

Joining a long list of newspapers using the G-E Electronic Press Drive, the ***Oakland Tribune*** is now taking advantage of this drive's flexibility and smooth operating characteristics. Like the other newspaper publishers across the country using this electronic press drive, the ***Tribune*** realizes that —

1. The smoothness of operation, both starting and stopping, results in fewer web breaks and more production.

Stepless speed adjustment eliminates web-breaking jerky speed jumps. The press climbs from threading to full-speed smoothly and easily. When stopping, dynamic braking on each unit brings the press to a smooth stop. The cost of brake adjustment and maintenance is eliminated.

2. The wide variety of press combinations makes this an extremely versatile and flexible drive.

With an individual drive motor for each press unit and folder, each motor handles threading, inching, running, and braking for its unit. Since any combination of press units can be arranged, the ***Tribune*** can meet varying production schedules as well as possible color runs.

Besides flexibility, the individual drive system is "production insurance." In the event of motor failure, two-thirds of the motors will operate all units of the press at above two-thirds speed.

Investigate this modern drive for use on your newspaper press. G.E.'s application and sales engineers will be glad to discuss it with you. Contact your nearest General Electric Apparatus Sales Office or write for Bulletin GEA-5523. General Electric Company, Section 653-33, Schenectady 5, N. Y.

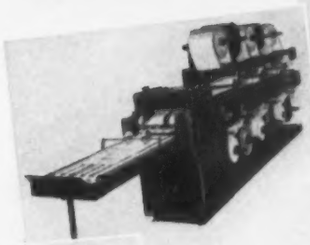
GENERAL ELECTRIC

All power requirements are handled on the Oakland Tribune's new Hoe Color Convertible Press with 10 individual G-E drive motors. Individual adjustable-speed drives on each press and folder unit eliminate the need for slow motion motors, over-running clutches, and drive and press brakes. Fire hazards are reduced, maintenance costs lowered by force ventilating of motors.

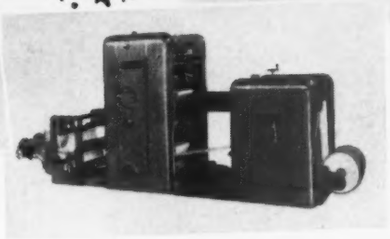
Giving the Oakland Tribune economical flexibility and close speed control, the ignitron rectifier controls and powers the drive. Operating to supply adjustable voltage to the motor, these units are designed in "building-block" fashion to accommodate future units. All components are easily accessible through full front and back doors.

Announcing

MODEL D



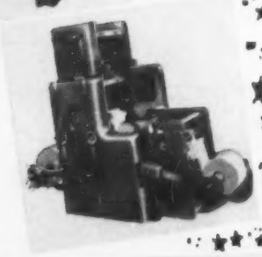
MODEL C



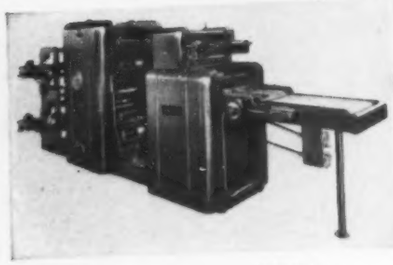
17 X 26

COLLATOR

COLORVERTER



MODEL C3C RTR



MODEL B

MODEL C3C

You're invited!

Combine business with pleasure and come to California this summer! Visit the Lynwood plant of Western Gear Works, manufacturers of Dutro-Western Speedflex rotary presses, auto-collators, and ColorVerters. You'll see the most modern rotary press equipment turning out business forms, office stationery and a wide variety of form and publication printing. You'll see up-to-the-minute methods in rotary printing which will enable your plant to open up new avenues formerly confined to flatbed sheet methods.

VISIT THE SEMINAR ANY DAY — AUGUST 9-20!

We'll be happy to make hotel reservations for you. Just write or wire the accommodations you need and prefer. We'll do the rest! Please address us at our new, expanded quarters:

Orville Dutro & Son, W. M. Garland Bldg., 117 West 9th St., Los Angeles 15, Calif.

direct inquiries to

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PRINTING PRESS SALES AND SERVICE

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TRINITY 8556

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RANDOLPH 6-7971

WESTERN GEAR WORKS
PRINTING PRESS MANUFACTURERS

THE NEW HEAVY DUTY PONY AUTOPLATE MACHINE

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY

EXECUTIVE AND SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, N. Y.

THE NEW HEAVY DUTY PONY AU

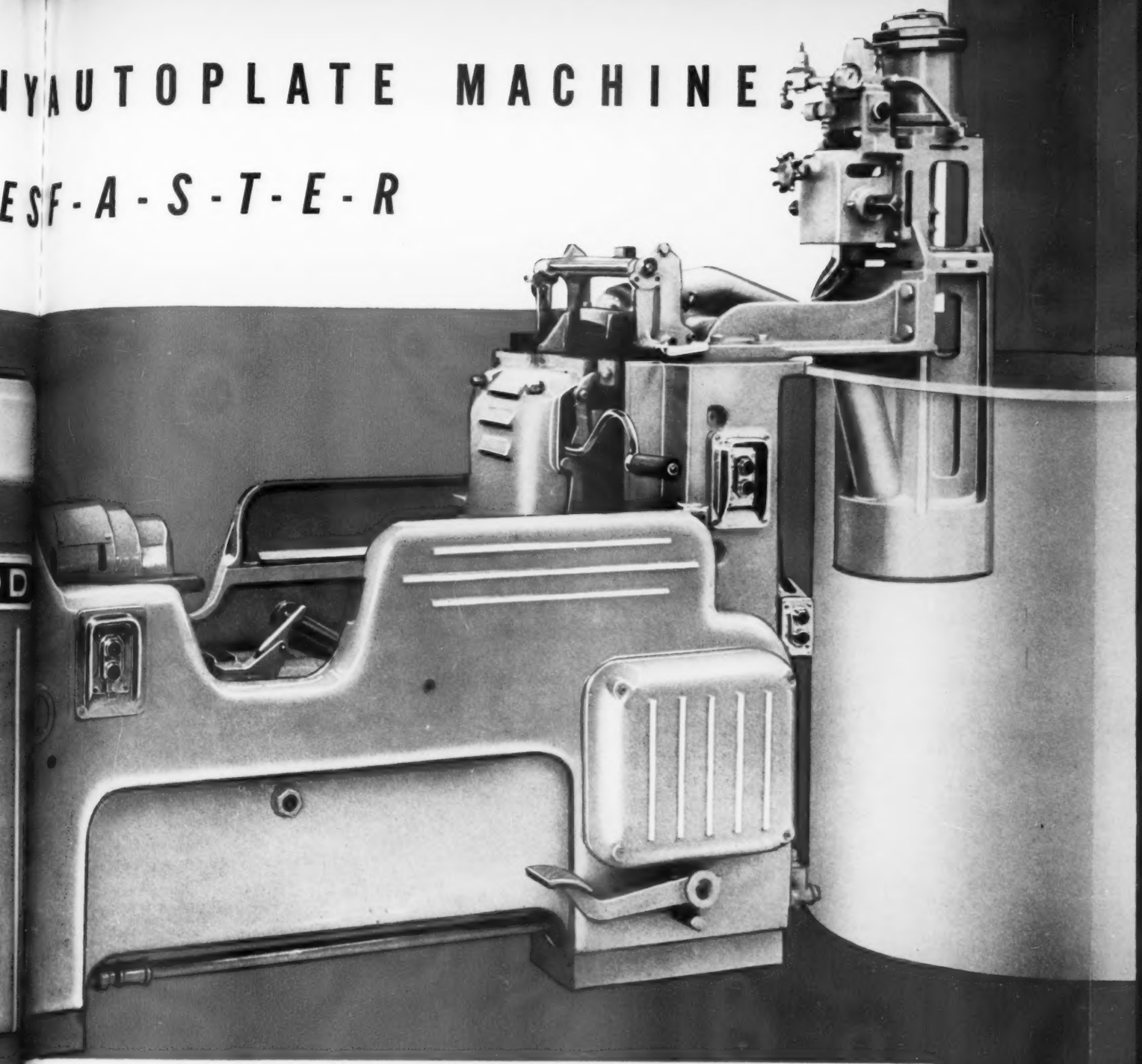
BETTER PLATES F-

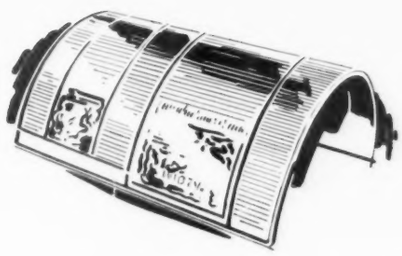
IF IT'S Wood IT'S GOOD

The Pony Autoplate user can now produce stereotype plates of improved quality at a maximum production rate of three plates every two minutes . . . an increase of 50% . . . requiring less manual effort than has been previously possible.

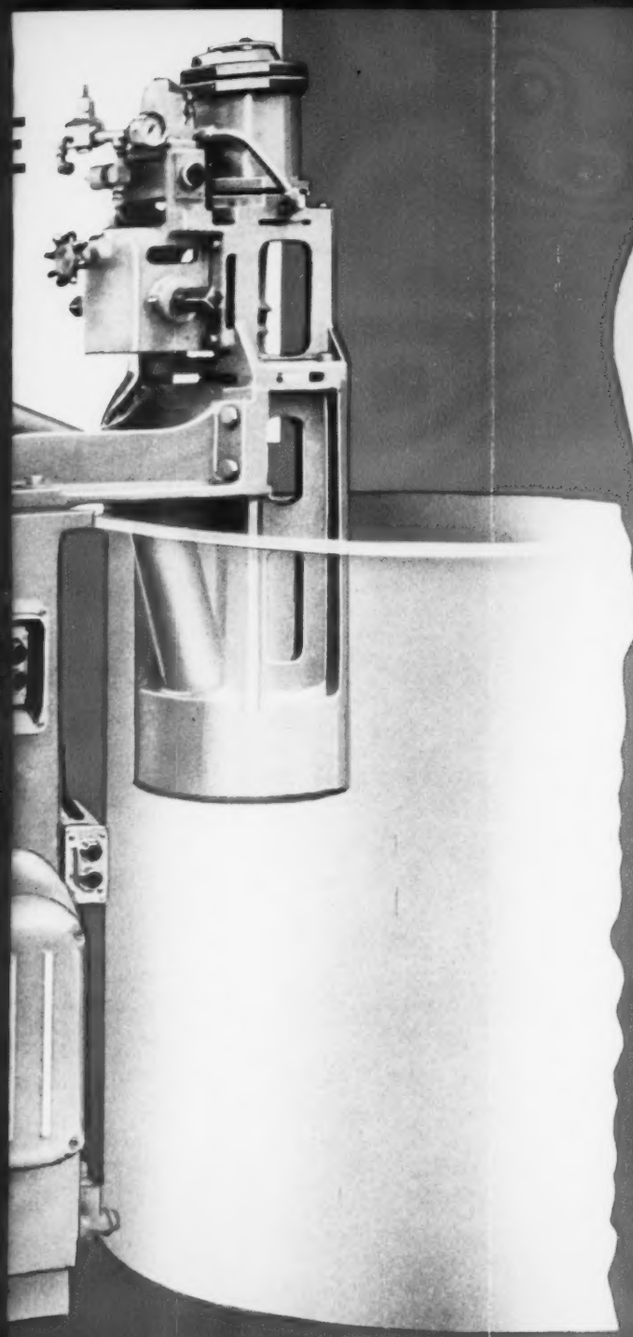
NY AUTOPLATE MACHINE

ESF-A-S-T-E-R





The rapid pour of the Electro-Pneumatic Pump, individual water-temperature control of Core and Casting Box, Single-piece frame and two Shaving Knives are features that produce more accurate plates of greater density, therefore being less porous, at a maximum rate of one plate every 40 seconds.



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ELECTRO-PNEUM
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pourings of stereotype m
Casting Box . . .
accurate
Operates only when
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Vacuum applied . . . water c
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in pouring position. A
protection against

Automatic,
and Casti

Core
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1

TRO-PNEUMATIC PUMP
c, push-button controlled
ereotype metal into the
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accurately . . . safely.
only when the following
conditions are met:
. . . water circulating . . .
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position. Also provides
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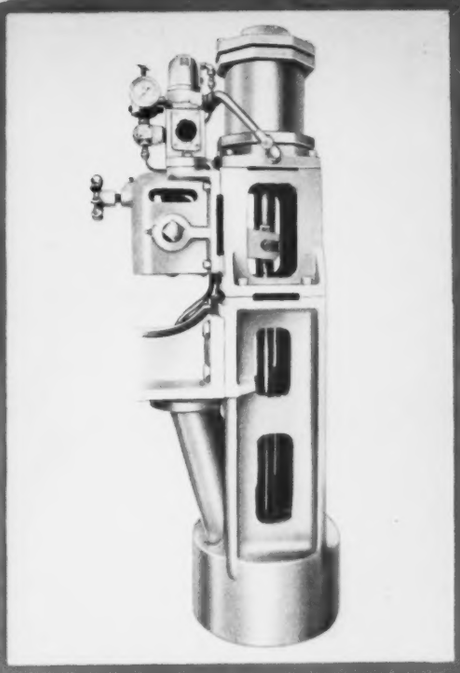
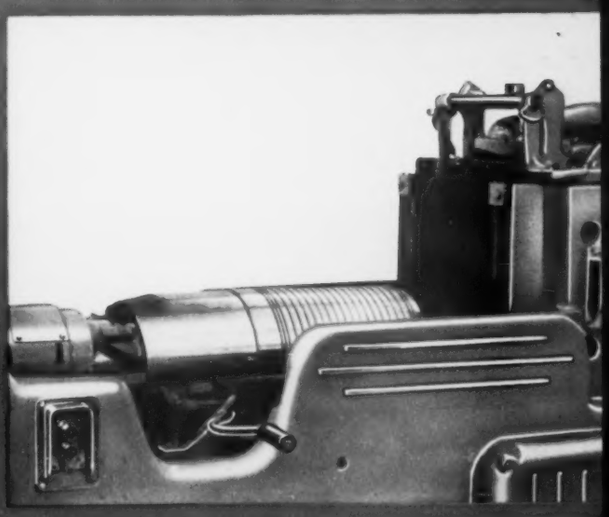


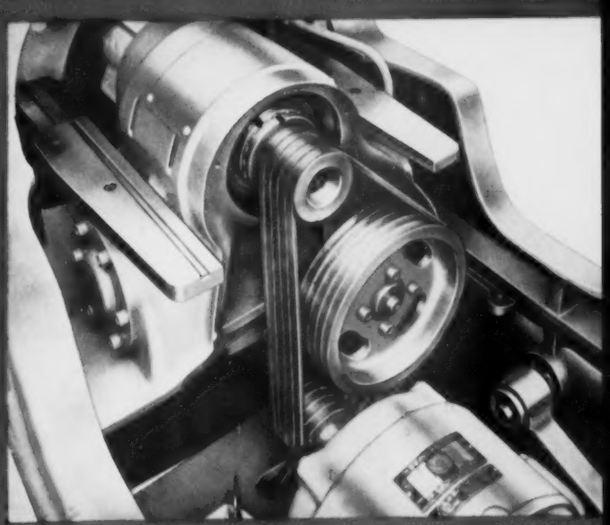
2

WATER-COOLED CORE AND CASTING BOX
Automatic, individual, adjustable Core and Casting Box water-temperature control.
Core lockup mechanism enclosed for protection against metal spills and foreign matter.



3

DRIVE
Vibration free . . . quiet . . . easily maintained.
Multiple V-Belt drive of Knife Bar Gear Box and Cutting Saw by 5 HP ball-bearing Motor.

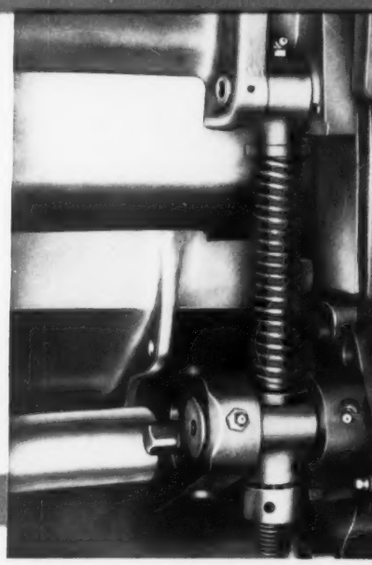


4

WATER-COOLED SHAVING ARCH
Massive, rigid, one-piece construction reduces maintenance and assures accurately shaved plates. Plate is accurately positioned by means of an improved Plate Stop. The power operated Plate Lifter automatically locks the plate in Arch where it is maintained under constant, pre-determined spring pressure during the finishing process.

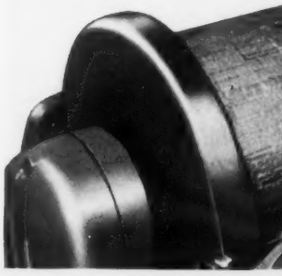
5

DETAIL OF PLATE LIFTER AND SPRING
Showing a portion of the Plate Lifter and one of the two springs which apply pressure to keep the plate firmly seated in the Arch.



COOLING STAND
Automatic water-cooling and air-drying of plate. Uncovered plate facilitates handling.

Plate in position for water-cooling and air-drying.



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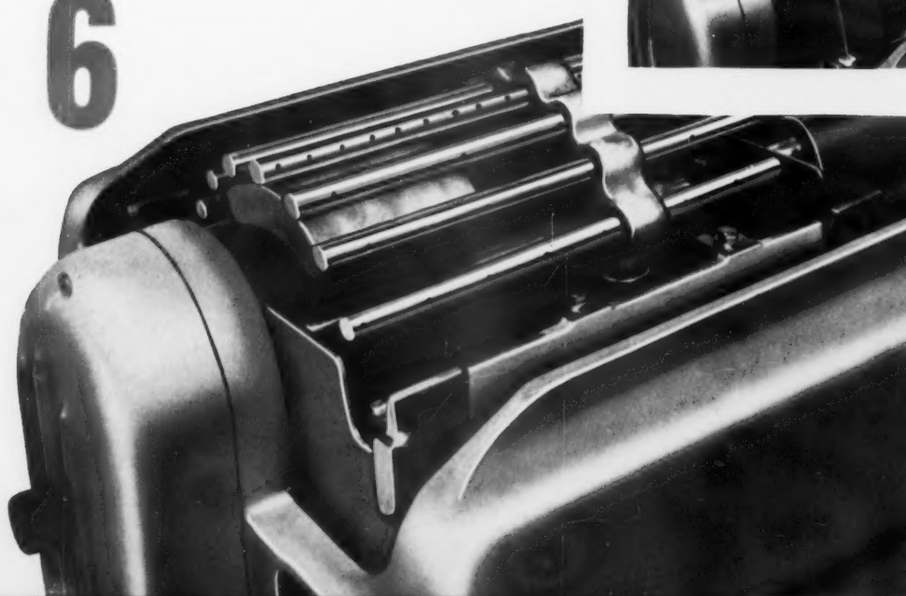

S

Electr
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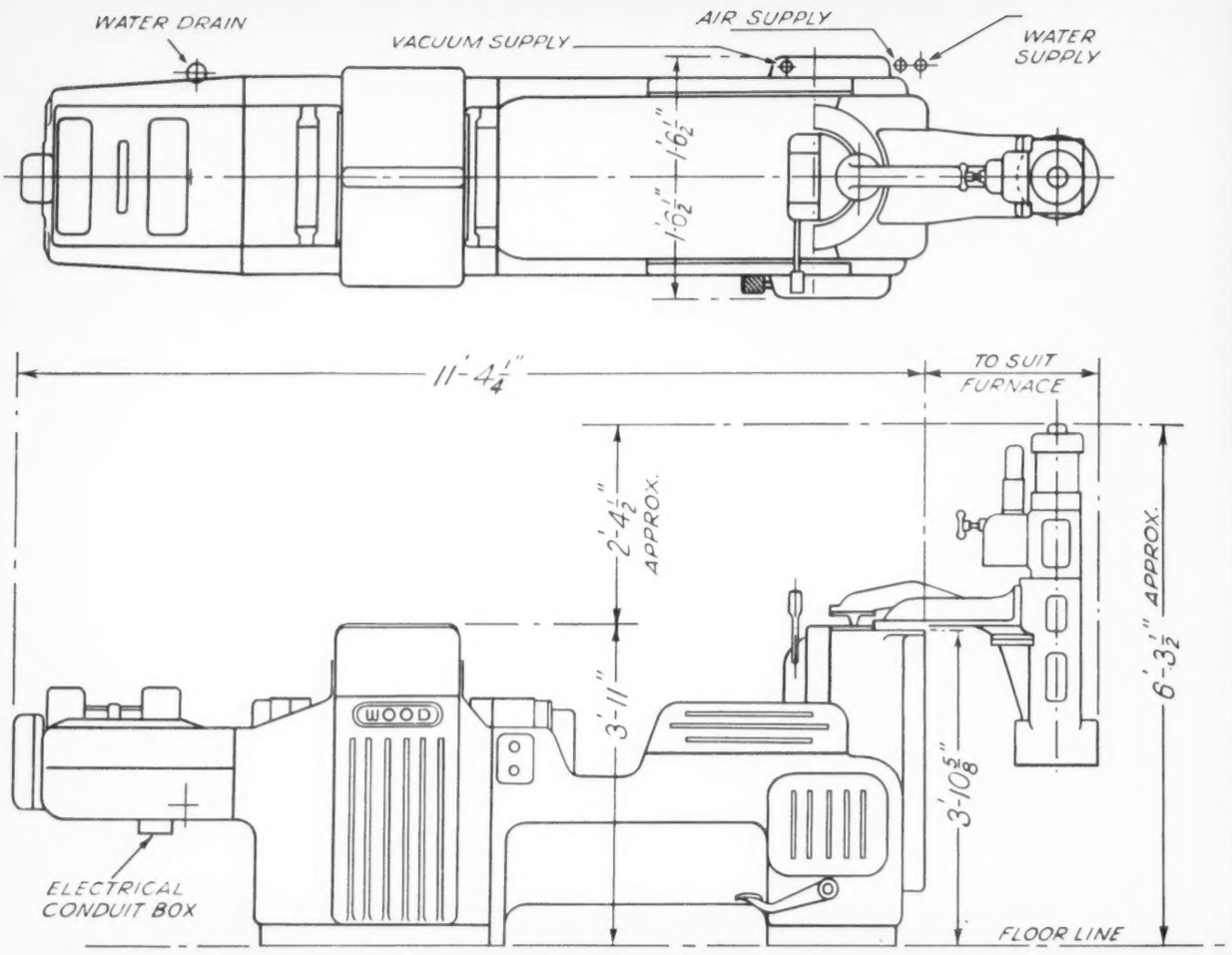
IF IT'S Wood IT'S GOOD

SPECIFICATIONS



Electrical power required: 6½ Horsepower
Compressed air required: 12 C.F.M. @ 70 PSI
Water required: 20 gal. per min. @ 20 PSI
Total Weight: 9,000 lb. (Approximately)

IF IT'S Wood IT'S GOOD

WOOD NEWSPAPER MACHINERY CORPORATION
PLAINFIELD, NEW JERSEY
EXECUTIVE AND SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, N. Y.

CUT PLATE MAKING EXPOSURE TIME IN HALF

"Cut printing time in half". (Los Angeles platemaker.) "Exposure time on photo-composing plates cut in half. With less than perfect contact a good image is retained." (Large industrial company). "Doubled capacity in making plates." (Indianapolis lithographer).

"The saving in current has probably paid for the lamp." (Waco platemaker)

"The voltage control mechanism assures **MAXIMUM EFFICIENCY AT ALL TIMES"** (Pittsburgh platemaker)

"CLEARER, SHARPER REPRODUCTION"

"Eliminate dot undercutting by crossover of reflected light rays." (San Francisco platemaker)

And In the Camera Gallery

"UNIFORM COVERAGE OF LARGE AREAS" (Louisville printer)

"NO FLUCTUATION IN LIGHTING"

"Eliminate illumination variable in accurate control of densities, regardless of line voltage variations." (St. Louis printer)

POWERFUL

"Punch through dense Kodachromes." (New York platemaker)

CONSTANT COLOR TEMPERATURES

"We wonder how we got along without it for so long." (Salt Lake lithographer)

PRECISE CONTROL OF INTENSITY ON STEP AND REPEAT MACHINE

"One of the best investments we've ever made." (Phoenix platemaker)

"TROUBLE-FREE OPERATION WITHOUT SHUT-DOWN TIME"

(A leading map maker)

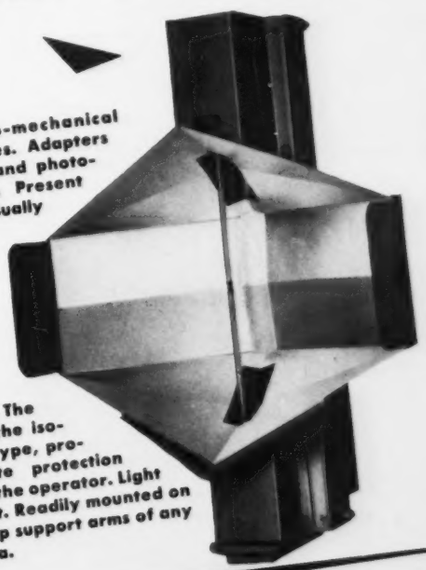
Strong

GRAFARC

Fully Automatic, High Intensity

ARC LAMPS

"Mechanical feed system saves time. Makes job easier." (Buffalo platemaker)



Models for all photo-mechanical reproduction processes. Adapters to fit most cameras and photo-composing machines. Present line supply wiring is usually adequate.

See the amazing new, low-cost Grafarc Challenger Camera Arc Lamp. A vertical trim lamp which burns at 75 amperes and 23 volts at the arc. The transformer is of the isolated secondary type, providing complete protection from shock to the operator. Light in weight. Readily mounted on the lamp support arms of any camera.

THE STRONG ELECTRIC CORPORATION

TOLEDO 2, OHIO

307 CITY PARK AVENUE

Please send free literature on Strong Grafarc Lamps.

NAME _____

FIRM _____

STREET _____

CITY & STATE _____

NAME OF SUPPLIER _____

Decitron

. . . INDUSTRY'S MOST RELIABLE ELECTRONIC COUNTER

Model D1
Counts up to 20 units per second. Other models up to 5000 UPS.

Model P2
Counts in any desired total 1-100. Other models 1-1,000,000

Model D2144
Double Decitron with 12 place tubes, counts gross lots as one unit on totalizer.

Model P4W
Desired counts by units 1-10,000 and wired-in warning system.

New, highly perfected Decitron electronic counters cover every counting need . . . from pills to case lots — in any quantity — at amazing speeds (up to 6000 units per second.)

Preset counters afford desired total counts i.e. dozens, fiftys, gross lots, etc. Lineal footage counters totalize production of paper, cloth, etc. Warning systems and other circuits can be energized by these counters if desired.

Write today — we want your counting problem.

POST

ELECTRONIC PRODUCTS DIVISION
POST MACHINERY COMPANY
Beverly, Massachusetts

A brief case...

for getting better acquainted with this offset specialist

Your ATF representative knows offset from platemaking to finished job. It figures—his company's line of presses run from a 14 x 20 Chief, through the 14-press Mann line, up to the giant web-fed Webendorfers.

If you are planning to get into offset, or to expand your present offset production facilities from duplicators, the ATF representative is an ideal man to have in on your production equipment discussions. He can offer you simple plate-making equipment and presses, such as the Chief 20, in the size range needed to improve your productive capacity.

If you are a printer planning a further step in offset, your ATF representative can tell you about our outstanding camera and advanced plate-making equipment as well as high production Chief, Mann, and Web-fed offset presses listed below.

With this complete line of products to sell (letterpress, too, incidentally), the man from ATF can give you a sound recommendation when it comes to picking equipment that best fits your operation.

Makes a good deal of sense to call on him, doesn't it? It makes even more when you take a closer look at his line-up of ATF offset presses waiting for you on the following pages. AMERICAN TYPE FOUNDERS, *a subsidiary of Daystrom, Inc.*, 200 Elmora Avenue, Elizabeth, New Jersey.

OFFSET PRESSES—ATF Chiefs 14 x 20 to 22 x 29 · ATF Mann 22 x 34 to 42 x 65, one- and two-color. Also 38 x 53 Perfector. ATF Web-fed Webendorfer (Business Form, Publication, Webcolor, and Specialty presses, size to order).

PLATEMAKING EQUIPMENT—ATF Contact Printing Frame · Cool-top Layout Table · Film Developing Trough · Plate Developing Trough · Plate Whirler · Rubbing-up Table · Vacuum Printing Frame.

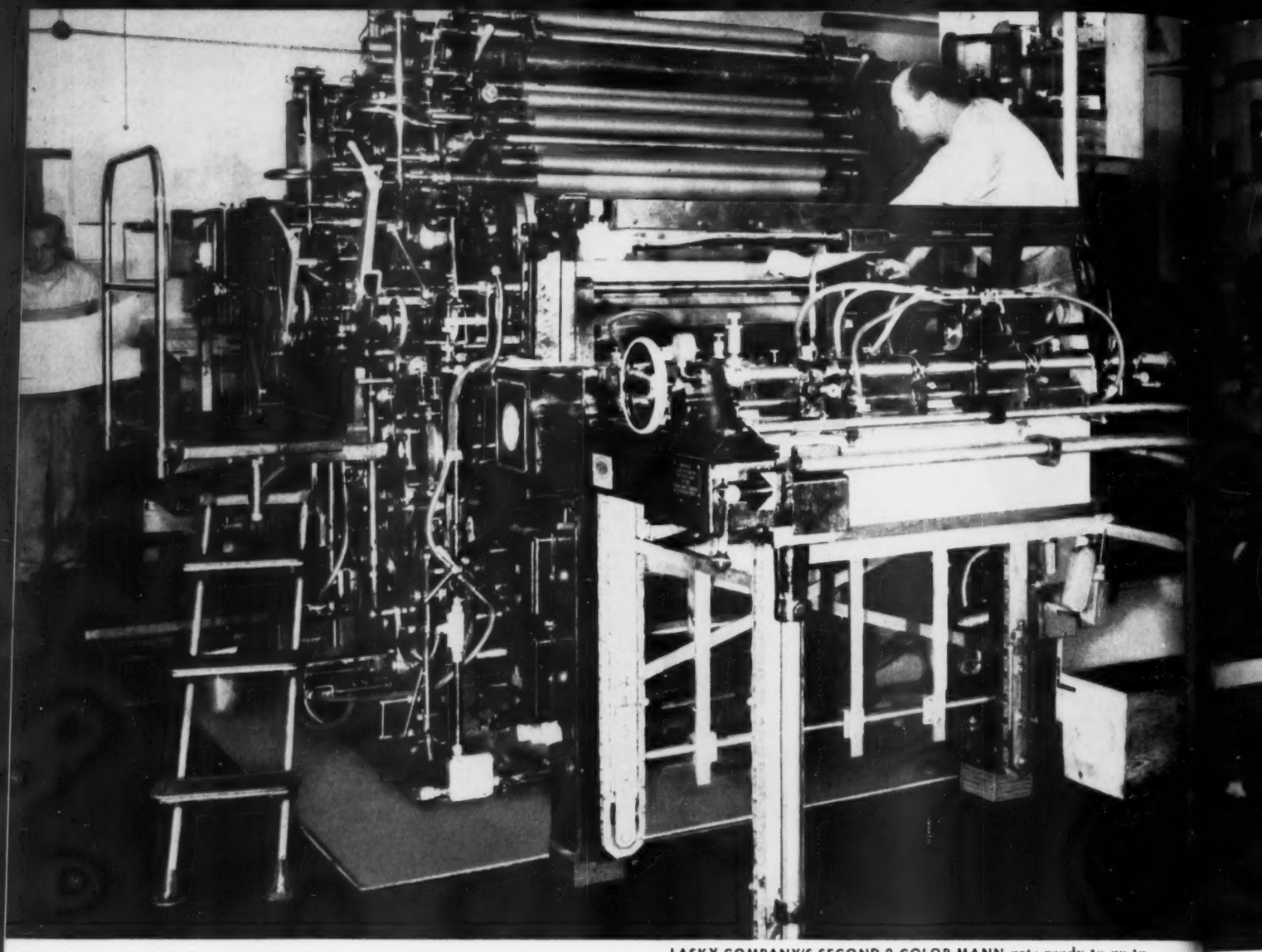
OTHER EQUIPMENT—ATF Process Camera, 24 x 24 · Douthitt Photomechanical Equipment · Hadego Photo Compositor · Kenro Camera · Flo-Mix Dry Powder (non-offset) Gun · Bindery Equipment.

4.8

ATF

BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

Gravure...Letterpress...Offset



LASKY COMPANY'S SECOND 2-COLOR MANN gets ready to go to work as press foreman, Charles Wheeler, sets up for a job on it.

"Our 1st Mann press sold us our 2nd"

"We were a little nervous about our first 2-color Mann," Saul Lasky of Newark, New Jersey's Lasky Company admits, "but it took only one year's experience with our Mann to convince us we made a good move.

"It earned money for us, boosted production, and gave us uniformly high-quality presswork. So the decision to install our second Mann came a lot easier."

And Charles Wheeler, Lasky's press foreman, is even more specific about the job the new Manns are doing. "The ink distribution lets you print solids as easily as a few lines of type—without streaks, ghosting or fade-out," he states. And he goes on to say:

"We're sure of perfect register at *any* speed—on the Mann there's no transfer of the sheet between colors. And you can back up jobs faster with no register cams to mark up the face of the sheet."

For facts on Mann features, check your ATF representative. Or write for the latest folder "Offset Unlimited" covering all sizes of Mann 1-color, 2-color and Perfector presses. American Type Founders, *a subsidiary of Daystrom, Inc.*, 200 Elmora Avenue, Elizabeth, New Jersey.

M.4.2

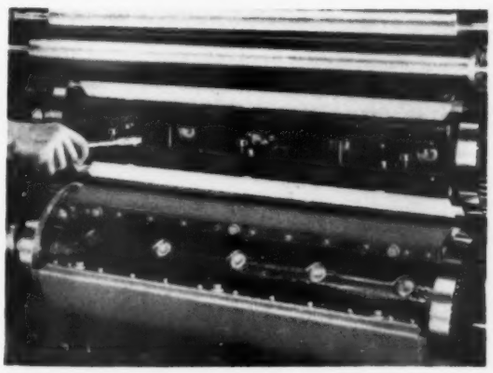
ATF

BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

Gravure...Letterpress...Offset

"CUT CHANGE-OVER TIME IN HALF"—that's what Hodes-Daniel pressmen say about these two ATF Chief 29's.

How ATF Chief 29 saves money on runs under 50M



MORE GET-UP-AND-GO of ATF Chiefs is the result of several key features. For example, accessibility of plate and use of bar clamps make plate changes swift and simple.

Take New York's Hodes-Daniel Co., Inc., for instance.

Specializing in syndicated direct-mail pieces, they've got to turn out top-grade color work and keep a tight rein on production costs at the same time. They do it with two ATF Chief 29's.

Here's how they figured: their choice narrowed down to two presses—an ATF Chief 29 and one more expensive and roughly 500 impressions an hour faster. But the time required to change over from one job to another on the second press was about twice that required on the Chief!

That meant the Chief could be set up and run 5M impressions before the other press even got started. And it would still be ahead of the other press after 10 hours or a run of 50M impressions.

It wasn't a hard choice. Hodes-Daniel installed an ATF Chief and followed up a year later with another.

If production costs are keeping you up nights, check the complete line of ATF Chiefs, including 14 x 20, 17 x 22, 17 x 24 and 22 x 29 precision-built presses. They're setting a new standard for the industry in efficiency.

American Type Founders, *a subsidiary of Daystrom, Inc.*, 200 Elmora Avenue, Elizabeth, New Jersey.

C.4.1

Better, More Profitable Printing from the Widest Line of Processes

GRAVURE . . . LETTERPRESS . . . OFFSET

ATF

WILSON WIRE-GRAMS

Here comes Heeney with the color sample for the new lipstick catalog

Life Depends on WILSON WIRE

In getting out a magazine like LIFE every week, precautions must be taken to insure smooth, speedy operation. That's why Wilson is proud to say that a good portion of Life's weekly run is stitched with our wire.

The care that we take to produce the right kind of wire, uniform in size and temper and free from nicks, can help speed your binding job too. Call or write Wilson to find out what these advantages mean to you.

WILSTITCH WIRE

- DIMENSIONAL ACCURACY
- UNIFORM TEMPER
- FREE FROM DEFECTS

Write or call Wilson
Telephone — LAfayette 3-1221

WILSON STEEL & WIRE COMPANY
49TH STREET & SOUTH WESTERN AVE. • CHICAGO 9, ILLINOIS

Introducing...

"Slic"

the new Silicone Solution that Prevents Type Metal Adhesion

Slic is a new emulsion of the silicone family compounded for use in the prevention of metal adhesions to steel or other metal surfaces. It has been successfully tested on mold wipers—back and front—and is applicable to such surfaces as spaceband sleeves, vise jaws, etc., for the same purpose, rejecting metal adhesion. It means an end to sticking slugs in particular.

LOOK AT THE ADVANTAGES!

1. "Slic" contains greater percentage of silicone—35%.
2. The silicone base is of high viscosity for longer life at high temperatures, and is non-flammable.
3. Conveyed in a harmless emulsion, which will not etch metal or irritate human skin.
4. Water-thin solution is easy to apply.
5. Much lower in cost.
6. The 6 oz. can has a handy dispenser. This container can be refilled from any larger supply ordered later.
7. Available in 6, 8 and 16 oz. cans.

Precision TRADE ★ MARK Parts

BRANCH: 1327 BROADWAY, KANSAS CITY, MO
AGENCIES: CHICAGO • MINNEAPOLIS
LOS ANGELES • DENVER • BOSTON
CANADA: SEARS LTD. and Agents Overseas

LINOTYPE PARTS *Company, inc.*
SOUTH HACKENSACK, N. J.

more HOE press equipment for TORONTO DAILY STAR

To provide for its continually increasing growth, the *Toronto Daily Star* has ordered a new nine-unit HOE COLOR-CONVERTIBLE Press and several color couples for addition to present presses.

This new equipment will enable the *Star* to produce up to 72-page 9-column newspapers with spot color both on the new and present presses.

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Paper Distortion on Press Leads to Register Problems

By WILLIAM BECKETT*

**Executive Vice Pres., The Beckett Paper Co., Hamilton, O.*

Abstracted from an article entitled *How To Prevent Misregister Caused by Distortion of Paper on the Press.*

THE purpose of this article is to describe and define the properties of paper which cause it to expand or contract. It also suggests how the conditions under which paper is printed can be controlled to prevent the dimensional changes from becoming so large as to affect register.

It is natural and inevitable for paper to change its dimensions when moisture is added or taken away. From this immutable conduct of the substance on which our livelihood depends arise some of the most vexatious problems in connection with printing.

We are aware that the general truth of the statement we have made concerning the expansion of paper is known to most printers and to many paper salesmen. We have also discovered that even though this is understood and accepted, there are many puzzling manifestations in the daily experience of printers which can be explained and corrected only by applying a specific understanding of what paper will do in certain circumstances.

What we are to say concerning the behavior of paper will apply to all methods of printing. However, since it is probably true that the problem of moisture control is more complicated in offset lithography than in letterpress or intaglio, on account of the use of water in the process itself, as well as the great physical forces involved, we shall consider the problem largely from the offset printer's point of view.

The Composition of Paper

Printing paper is composed mainly of fibers of cellulose. The individual fibers range from 0.01 in. to 0.20 in. in length and from 0.0003 in. to 0.0020 in. diam. A single fiber is about as strong as steel of the same dimensions. The fibers are not soluble in water, but when they are wet they become soft and flexible, expanding from 20% to 30% in diameter and from ½% to 1% in length.

The fibers in a sheet of paper adhere to each other strongly as the result of the physical and chemical treatment they are given in the wet stage of papermaking. Particles of pigment, starch, rosin sizing, color and other substances surround the fibers and fill the interstices between them, but the individual fibers retain their identity throughout the life of the paper.

What Causes Curl

The fibers are not perfectly random in their alignment within the sheet of paper. Most of the fibers lie in the direction of travel of the web of paper during its manufacture. Thus, cutting across the machine direction of a sheet of paper, one would expect to cut across more fiber diameters than in cutting with the machine direction, or "with the grain," in the parlance of the trade. This is exactly what happens. For this reason, when a sheet of paper is moistened, and the individual fibers expand many times more in diameter than in length, the over-all expansion of the sheet is several times greater across the machine direction, or "across the grain," than in the machine direction.

The disposition of individual fibers from the top to the bottom of a sheet of paper is not uniform. The alignment of fibers in the machine direction is more pronounced on the bottom, or wire side, than on the top, or felt side.

Thus, one might expect that when a sheet of paper is moistened, and it expands as described in the above paragraph, its wire side would expand more than its felt side. *This is what actually does happen, and is the main reason why paper tends to curl.* When a thin membrane, such as a sheet of paper, undergoes unequal expansion on its top and bottom sides, the longer side tends to curl around the shorter. The thinner the sheet, the more marked is this tendency.

This description of the mechanism producing curl in paper is deliberately oversimplified for the purposes of this article. Actually, a number of very subtle forces enter into the process and complicate it greatly. One of these is the fact that, although when cellulose fibers are moistened they expand and when they lose moisture they shrink, when a sheet of paper is moistened and then dried out to its original moisture content, the shrinkage does not exactly equal the expansion.

Thus, the extent of shrinkage or contraction, as moisture is taken away from or added to a sheet of paper, although it is approximately proportional to the amount of moisture taken out or put in, will depend in the most precise degree on whether the sheet had previously been losing or gaining moisture. This is something which the user of paper cannot readily determine, and this fact sometimes

brings about unexpected eccentric behavior by the paper which can be explained only by an understanding of these rather involved concepts.

Relative Humidity Changes

The moisture content of a sheet of paper is approximately proportional to the relative humidity of the atmosphere in which the paper exists, but here, again, there is a departure from perfect proportion. If the relative humidity is reduced to its original level the paper will not quite dry out to its original moisture content. This lagging effect is known as hysteresis, and is another complication in the performance of paper.

In practice, it is impossible to treat each of these factors separately and attempt to control them independently. Fortunately, the problems of curl, expansion and shrinkage all respond to the same treatment, and when an offset or letterpress printer does what must be done to prevent his sheet from expanding between impressions, he also establishes safeguards against wavy edges, tight edges, and curling.

It all resolves into the simplest possible formula: *Keep the moisture where it was when the paper arrived in the plant.* The means of doing this are well known to all who use paper, and there is simply no substitute for careful regulation of temperature, relative humidity and plate moisture.

Physical Stresses on Paper

Offset paper can be distorted by other causes than a change of moisture content. The physical stresses on a sheet of offset paper passing between the plate and the impression cylinder are enormous. They actually pull and squeeze the paper out of shape, both with respect to thickness and the area of the printing surface.

One of the factors which will distort the sheet passing through the offset press is grippers set so they grip the sheet unevenly, exerting a greater pull at one point that at others. Another is overpressure on the back cylinder, which will result in paper elongation. Another is excessive alteration of cylinder diameter ratios by building up packing. Another is the uneven distribution of moisture on the plate and hence on the sheet, by reason of the arrangement of printing and non-printing areas on the plate, or perhaps because of faulty fountain adjustment.

Creepy Offset Blankets

A creepy blanket will give a distorted image, which after the impression has been made will give the appearance of sheet distortion. This can be detected and distinguished from actual distortion of the sheet by careful measurement of the paper and the impression with reference to the actual plate dimensions.

Sometimes the plate itself becomes distorted by stretching, or because of improper straightening from a cocked position. This will give a troublesome time to the pressman who may be looking for the source of difficulty in the paper. The only cure for it, after it is identified, is a new plate.

Other Causes of Misregister

Poor trimming of the paper in the mill or in the printing plant can cause misfit and misregister. If the paper has a wavy gripper edge or a tendency to curl, the result may be front and side misregister.

We have been told of misregister caused by a feathered edge, which results from trimming with a dull knife. A pronounced feathered edge does not guide correctly, will cause some drag resistance to a sidewise movement, and will not come to rest accurately against the guide stops.

A bowed gripper edge will often cause the sheet to go into the guides farther in some cases than in others, and this will, of course, produce misregister. This is especially serious because bowing is likely to occur to greater or less degree from ream to ream, and cannot be counted upon to be uniform.

The track of the ink and the speed of the press are major factors in the development of large forces tending to distort the paper. If extremely tacky ink is used at high press speed, the pulling force at the point of peeloff becomes enormous, and if it does not split the paper asunder may at least impart a mechanical curl as well as a measurable and troublesome degree of permanent stretch.

It is well to remember that the greater the moisture content of the paper, the more elastic and stretchable it becomes. In order to minimize any of the forms of mechanical stretch we have touched upon, the paper should not be run above the moisture which would be in equilibrium with a relative humidity of 65%. Forty-five per cent is much safer.

Faulty press setting which tend to distort the paper are within the province of press operators, who generally know how to prevent these conditions in the first place, or, if they occur for any reason, can readily recognize and correct them.

We have mentioned some of the main types of paper distortion resulting from press conditions merely to illustrate the point that although the paper itself may be misbehaving on account of improper environment, there are also many other causes which can create deceptively similar results.

Best Panacea is Prevention

So far as expansion and contraction of paper are concerned, there is nothing in the list of corrective processes so valuable or feasible as prevention. We take the position that all paper distortions caused by the gain or loss of moisture are preventable, and that only if they are consciously and actively prevented can they be depended upon not to occur.

We cannot too strongly advise all printers to install and use some sort of temperature and humidity control. The cost of such an installation must be thought of in terms of the cost of lost press time, spoiled paper, delayed deliveries and degraded quality of printing which are caused by the lack of control.

We do not propose a system of control which will attempt to regulate relative humidity within the narrow tolerance required in a laboratory. This is difficult and unnecessary. We do feel strongly that relative humidity control within limits not more than 10% points apart is essential for reasonably accurate work. We do not believe very accurate register on a sheet 44 in. by 64 in. can be assured where the relative humidity varies more than 5% during the run.

The effect of temperature in problems involving moisture must not be overlooked. Paper on a skid should be allowed several days, depending on its volume, to come to temperature equilibrium with the pressroom atmosphere. If cold paper is exposed to a warm, humid atmosphere, moisture will condense on the edges of the sheets and cause them to expand and go into a wave. If hot paper is exposed to a cool atmosphere, moisture will be distilled from the paper into the atmosphere, leaving the edges contracted and tight with a hump in the center of the sheet.

Gravure Research Elects Officers — Here are shown the officers and directors elected by Gravure Research, Inc., for 1954-55 at its recently held annual meeting in Chicago. Front row, left to right: President, Ted J. Stulz, Parade Publication, Inc., New York, N. Y.; Technical Committee, M. J. Romano, Triangle Publications, Inc., Philadelphia; Director, Robert Hazzard, Detroit Gravure Corp., Detroit. Back row, left to right: Secretary-Treasurer, Martin Waters, Art Gravure Corp., New York, N. Y.; Director, John Briggs, R. R. Donnelley and Sons Co., Chicago; Director, M. N. Davis, Kimberly-Clark Corp., Neenah, Wis.; and Director, Allen Black, Crowell-Collier Publishing Co., Springfield, O.

The organization now claims its membership comprises the major portion of publication and commercial gravure printing companies in the United States. The newest firm admitted was Crown-Zellerbach Corp., San Francisco. Future work of the group, to be conducted at Battelle Institute, Columbus, O., will be concerned primarily with simplification and control of gravure etching, together with improved methods and materials for cylinder correction and repair.

Burgeoning Technology In Newspaper Industry Fascinates Executives

By STAFF WRITERS

THE newspaper printing industry is and has been burgeoning with technological improvements. This was brought forcibly to the attention of newspaper production and mechanical executives at the June ANPA Mechanical Conference held in Atlantic City, N. J., on June 8 to 9 inclusive. The conference was held at Hotel Haddon Hall. Approx. 1125 mechanical executives and manufacturer and supplier representatives were registered. The dominant notes of the Conference were the recent advances which have been made in processes, methods, equipment and supplies. The major part of the program was devoted to discussion of recent developments in equipment which will speed up every operation in the newspaper plant. Included among the advances made recently in newspaper printing technology were those discussed by C. M. Flint, Director ANPA Research Department, chief of which are the Dow-ANPA rapid magnesium etching method and the no-pack stereotype mat. Other advances which occupied attention of the executives attending the conference were phototypesetting developments, a stereotype color mat matcher, continuing mailroom mechanization, r.o.p. color printing, precision measuring tools of many kinds and a brand new model of the Wood Heavy Duty Pony Autoplate casting machine.

Equipment and Supplies Exhibits

The equipment and supplies exhibits were the greatest in number ever held at any ANPA Mechanical Conference, 61 companies occupying 101 booths. There were a considerable number of companies exhibiting who are new to the industry.

While the Atlantic City Conference was not the largest in point of attendance, yet it was perhaps the most important regarding wonderful advances made recently in the industry with respect to processes, methods and equipment.

ANPA Mechanical Department Mgr. Richard E. Lewis with the assistance of the Mechanical Committee is to be complimented on getting together such a comprehensive technical program.

Actions Show Industry Is Awake To Its Problems

A PEP TALK on improving newspaper production techniques, suggestions on development of better supervision in newspaper mechanical departments and a lively discussion on fire extinguishing systems were the highlights of the opening session of the 26th ANPA Mechanical Conference held in Atlantic City. The first part of the meeting was under the chairmanship of Leven T. Deputy, Mechanical Supt., Dallas (Tex.) *News*, who in turn introduced the President of the ANPA Mechanical Committee, Joseph E. McMullen, Production Mgr., Milwaukee (Wis.) *Journal*.

McMullen called upon newspaper mechanical men to master newly developed techniques, continue to improve present processes and procedures, and develop even better coordination between production departments. Hitting back at critics who in the past have described the newspaper industry as a "sleeping giant," he said the giant is now awake. He reminded his audience that they now could demonstrate against those who say the newspaper industry is only impressive because of its size by fitting the new developments into their own operations.

Improvement Still Needed

A reminder that progress in improving newspaper production techniques is most encouraging but that the surface has only been scratched came from the President of the American Newspaper Publishers Assoc., Richard W. Slocum of the Philadelphia *Bulletin*. Slocum found that the newspaper industry is now awake to its problems and has become research minded, but he added ". . . . we must keep going."

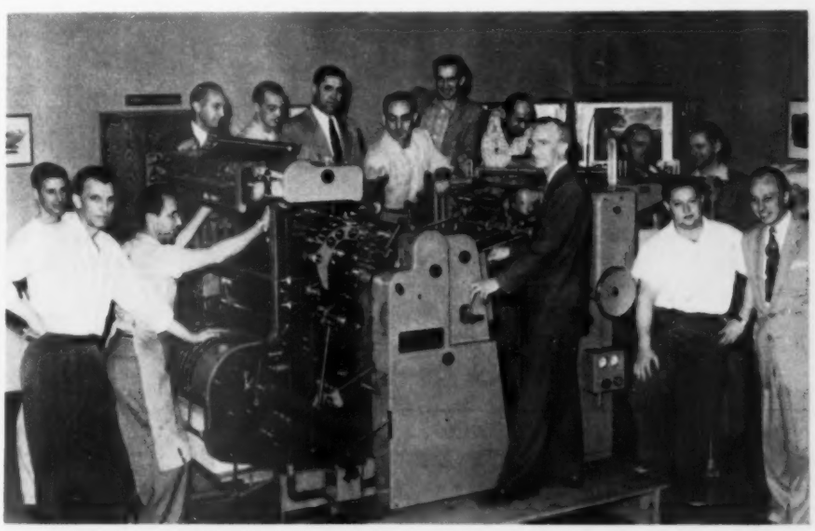
He remarked that the mechanical departments are the area where most of the expenditure is concentrated. Continuing, he added: "You have a serious, heavy responsibility in meeting the challenge of improving quality of printing at reduced cost."

Slocum also told the mechanical and production executives that improvement must be earned and worked for. The easy days, he said, are gone. He called for the ANPA Mechanical group to produce confidence in management that newspapers will solve their present problems and meet new demands of the future. The hard facts facing the industry, the speaker added, will not solve themselves. He reminded those present that they will worsen and will be overcome only by ". . . intelligence, work and determination. The answer rests with the mechanical men."

Nearly Full Participation

Present membership of newspapers in the ANPA represents circulation in excess of 90% of the total daily and Sunday circulations in the United States, said William Dwight, President, Holyoke (Mass.) *Transcript-Telegram*. Speaking on the organizational set-up of the ANPA, he asserted that the association functions as a clearing house of information where newspaper executives may find the answers to their problems of publishing a daily newspaper.

Dwight said the research program was designed to combat rising costs, acute



Miehle Offset Clinic—Officials of Miehle Printing Press & Mfg. Co. recently opened an offset clinic in the company's Los Angeles showroom. Classes, conducted by Miehle offset personnel, were designed to assist pressmen in developing better techniques, with emphasis on the operation of the Miehle No. 29 Offset Press. Charles E. Wortman, Asst. Mgr. of the Los Angeles office, indicated that plans were being made to open similar clinics in other cities. Pictured are several members of Local No. 22, CIO Lithographer's Union, attending one of the classes.

shortages and the familiar complaints of production—lack of process controls, web breaks, static electricity, ink offsetting, etc. He added that equipment in the ANPA's Easton, Pa., laboratory is valued in excess of a quarter of a million dollars. Concerning the cooperative research program being conducted by the ANPA research group, the speaker said that most of the equipment and supply companies who are participating are greatly interested in improving their products.

Mr. Dwight went on to describe the duties and functions of the ANPA Mechanical Dept. One such is the issuance of the quarterly Newsprint Waste Bulletin. On this, he remarked: "These bulletins give members an opportunity to compare their operations with other newspapers operating under similar conditions and of approximately the same size. The psychological effect of checking and recording the various types of newsprint waste also creates an awareness and consciousness among the men as to the importance of keeping waste to a minimum."

Part of the Strong Chain

Selection of employees as leaders, training of men to assume supervisory roles and giving supervisors a greater voice in affairs affecting workers were grouped together and named by E. J. Pelz as the missing link in the "strong chain being forged by newspapers to anchor themselves safely in the face of adverse competitive winds." Pelz is Personnel Director of the New York (N. Y.) *Times*.

He termed the missing link as "executive development," and said it was the "number one personnel subject which the best brains in American business are studying." The speaker explained that executive development means continually working to improve respect and cooperation among workers toward supervisors; selecting junior supervisors who in the future will be better managers than we have today; and helping develop men as supervisors with good judgment, imagination and energy.

Better Leadership Needed

Mr. Pelz advanced several reasons for the interest today in executive development. He said: "The average employee demands higher quality leadership from his boss than he did 30 years ago. The complexities of management today require a higher percentage of good managers per hundred employees. The systems of our free society can be voted out of office or eroded away if the majority of workers do not derive psychological and non-financial satisfactions from their daily jobs."

New equipment, techniques, promotion effort, etc., will mean little, according to Pelz, if employees remain uninterested. The attitude and behavior of workers, he said, will make or break "this vigorous new program for newspaper improvement." And he called "the immediate boss" the major factor in employee attitudes.

Few Born Leaders

Continuing, the speaker asserted that supervision is not a "natural game." He added that a few men are born leaders and a few develop leadership by trial and error, but no one can become expert at some activity without constant practice. He further claimed that something more than practice is needed, namely, competent purposeful instruction and a desire to improve.

Mr. Pelz concluded by offering a number of suggestion for executive development. They were as follows: work for improvement in executive ability; permit foremen and assistant foremen to attend mechanical conferences; read trade magazines and books; provide reading material on the techniques of supervision; provide the supervisory staff with facilities to get a medical examination at least once a year; appraise performance of supervisors reporting to you; make available statistical and cost data; hold meetings on such subjects as human relations; help develop skills among workers aimed at getting their ideas across to their own bosses; and provide methods by which assistant foremen can become acquainted with other branches of their own industry.

Maintenance on Ottawa Citizen

The meeting then moved on into a discussion of preventive maintenance. Chairmen of the meeting were Henry Garland, Production Mgr., Pittsburgh (Pa.) *Post-Gazette*, and W. Watson Southam, Executive Asst., The Southam Co., Ltd., Montreal, Can.

A thorough word description of maintenance of building, equipment and personnel at the Ottawa (Ont.) *Citizen*, a medium size daily, was presented by the Production Mgr. of that paper, John H. Harris. Choosing as his subject *Care Not Repair*, Harris advocated good housekeeping practices as "one of the greatest contributions to economy and efficiency." A clean plant, he added, will minimize the ever present fire hazard.

The speaker also argued for acquiring a building superintendent who is trained in maintenance duties. He called him the key man in any building care program. Continuing, he attached importance to a regular building inspection tour held about once a week.

Floor Enamel Saves Machinery

Harris thought that adequate notice concerning building care to departmental heads was well worthwhile. He remarked: "Floor enamel costs very little but saves many dollars of wear and tear on machinery from cement dust." He reported the experiment of painting all equipment in the same color has been tried at the *Citizen* with good results. The color chosen was green to give departments an air of neatness and efficiency."

Under equipment maintenance, a four point program is practiced as follows: operational maintenance, periodical maintenance, electrical maintenance and in-

The Spotlight is on

Frank A. Myers

On April 30, Frank A. Myers, 53, retired after 26 years in the lithographic business. He is one of the founders of Copifyer Lithograph Corp., Cleveland, and has served continuously as its treasurer. In 1928, Myers joined with Allen H. Frost to form Frost & Myers, Inc. (both had previously worked at White Motor Co.). Frost & Myers, Inc., was sales representative in Northern Ohio for Copifyer Corporation of Detroit and later for National Process Co., New York, N. Y. In 1933, Myers and Frost joined forces with W. W. Schaumann and A. F. Greiner to establish a lithographic plant in Cleveland, known as Copifyer Corporation of Ohio. The corporation purchased the stock of A. F. Greiner in 1937, and changed its name to Copifyer Lithograph Corp. In 1941, the corporation bought the stock of W. W. Schaumann, leaving Myers and Frost as equal remaining stockholders. Both Myers and Frost have taken an active part in trade association activities. Myers has served continuously since 1947 as a director of the National Assoc. of Photo-Lithographers. He has addressed annual conventions of NAPL and LNA on Good Shop Supervision, Work Simplification, and Replacing Old Presses with New Ones. He served seven years on the Research Committee of the Lithographic Technical Foundation (two years as Chairman of the Committee), and was a director for four years. Myers was successively treasurer, vice president and currently is president of Printing Industry of Cleveland. He has been on the labor negotiation committee since the first joint labor contract was signed in Cleveland, and has been one of two employer trustees of the Cleveland Lithographers Health & Welfare Fund. In 1945-46, Myers served as a consultant in the Printing & Publishing Div. of the War Production Board, spending half of each week in Washington. From 1951 to 1953 he served on the Printing and Publishing Industry Advisory Committee of the National Production Authority. Myers stated he will now be able to give time to his hobbies, which include amateur gardening, photography, gem collecting, astronomy, telescope-making and Boy Scout activities. Since 1949, he has helped over 1,250 youngsters to assemble a simple beginner's telescope. He makes the telescope parts in his basement shop which is equipped for wood and metal working. Travel in the United States and foreign countries completes the list of his future plans.

FRANK A. MYERS

spection. Mr. Harris stated: "Many machinery maintenance programs are apt to fall down because they are too complicated and top heavy. We have tried to find a simple procedure which everyone concerned can understand and which is easy to check and control."

A Good Electrician Helps

He told of acquiring an electrician familiar with the wiring of the *Citizen's* newspaper press as well as with the electrical installations in the building who was instrumental in solving the problems of electrical maintenance. He also described a maintenance chart which is designed to ensure that all jobs are done and nothing is missed. This chart covers periodical maintenance operations, inspection of vulnerable parts, correct grades of lubricants to be used, etc.

On machines which have lubrication points which are difficult to reach, these points are ringed in a distinctive color in order not to be missed. The Canadian production executive thought that operators should be encouraged to be responsible for the care of their own machines. At the *Citizen*, a daily schedule is made out for cleaning and adjustments of the individual machines.

Harris explained that in the pressroom one pressman is responsible for maintaining one unit and one for the folder. It is each one's responsibility to keep his unit in spotless condition.

Referring to the care of personnel, he said the *Citizen* has tackled the first aid problem by establishing adequate and properly maintained first aid kits in each department. He advocated taking an occasional trip through the plant and looking for sources of danger. Slippery floors, dangerous stairs, unprotected saws are among the common violations of safe practices.

CO_2 Systems Become Controversial

The assertion that carbon dioxide fire extinguishing systems are a valuable supplement to automatic water sprinklers but not a substitute for them provoked considerable comment among newspaper executives in the audience. The controversial subject came up during a talk by George W. Brahmst, Special Hazards Engineer, Factory Mutual Fire Insurance Co., on *How Pressroom Fires Start and How to Stop Them.*

Brahmst's reference to carbon dioxide (CO_2) systems was as follows: "They are particularly well adapted for protection of ventilating duct systems from pressrooms and stereotype pots. They also can furnish good protection for the press itself. However, there has been a considerable number of failures of these systems to properly extinguish fires, and entire dependence should not be placed on them to extinguish pressroom fires."

Protection is Within Unit

Vernon R. Spitaleri, Research Director, (Miami (Fla.) *Herald*, took an opposing stand by recommending a fixed installation of carbon dioxide. He said that with such a system the protection is within the unit itself and no water damage is possible as with sprinkler systems.

Brahmst reiterated that a sprinkler system supplemented with a carbon dioxide system will afford something to fall back on should the CO_2 not be able to extinguish the fire. John Park, Production Mgr., Chicago *Tribune*, remarked that insurance companies do not consider CO_2 alone as adequate protection. Spitaleri defended his stand for CO_2 by reporting that the *Herald* was given an insurance reduction after its installation of a CO_2 system.

Little Danger from Asphyxiation

Queried about the dangers of asphyxiation from the carbon dioxide gas, Brahmst replied that most systems provide adequate warning to get away from the CO_2 discharge. One newspaper executive present remarked that CO_2 extinguishers can't be depended upon to extinguish fires of major proportion.

At this point in the discussion, Harold Burke, Manager, Systems Div., C-O Two Fire Equipment Co., arose in defense of carbon dioxide systems. He said that a well-designed CO_2 system should operate so fast in extinguishing any size fire that it would be unnecessary to use a water sprinkler system.

A. E. Rosene, Production Mgr., St. Paul (Minn.) *Dispatch & Pioneer Press*, told of a fire which occurred on that newspaper. He said the CO_2 system which protects their plant extinguished the blaze so rapidly that they were able to be back in operation in a very short time. Brahmst acknowledged that carbon dioxide is one of the cleanest fire extinguishing agents known.

Leading Fire Causes

Other interesting parts of Mr. Brahmst's talk concerned defective electrical equipment which he termed the leading cause of fires. He said: "There is always a lot of ink vapor, grease and paper dust around a newspaper press, and this gradually collects on motor windings and reduces air cooling. If not cleaned frequently the motor overheats and catches fire." Most fires of this type, he added, can be put out with CO_2 extinguishers.

He named broken electric lamps as another common cause of pressroom fires. An unguarded lamp on a pendent cord can easily be knocked against the press and broken, and the white hot filament will then ignite flammable deposit or the paper web. The speaker suggested that all lamps in the vicinity of presses should have outer vapor-proof globes as a protection against breakage. Pendent lamps should have rigid pipe fixtures. Extension lamps should have heavy duty cord with key type socket and vapor-proof globes with metal guards.

Good Housekeeping Prevents Fires

Brahmst named smoking and cutting and welding as other leading causes of pressroom fires. Concerning the latter, he said they should never be permitted unless extreme precautions are taken. He added: "Keeping a newspaper pressroom clean is a time consuming and expensive job, but a vitally important one if serious fires are to be avoided."

Advocating good housekeeping in the pressroom as a fire preventative, he remarked: "Even more treacherous than the dirt we can see are the hidden deposits in ventilating ducts and fans. These deposits must be kept from building up to dangerous amounts."

On water sprinkler systems he stated: "Automatic sprinklers can be looked upon as a fireman and hose line stationed every 10 ft. throughout the plant, on the job 24 hrs. a day, seven days a week, ready at the first sign of fire to turn on the water and extinguish or control the spread until assistance arrives. At the same time the water starts flowing, an automatic alarm can be sounded to summon assistance."

Phototypesetting in Newspaper Work

PHOTOTYPESETTING machines and methods for newspaper composition, it developed at the Atlantic City ANPA Mechanical Conference in June, is being looked into with great interest by publishers, production and mechanical executives. In particular, phototypesetting for display composition has already

New York Newspapermen Meet—Approx. 120 newspaper executives were in attendance for the first New York State Capital District Mechanical Conference held recently in Albany, N. Y. The meeting featured several departmental clinics on newspaper production topics. The officers of the newly formed group are pictured above together with some of the participants in the conference. From left to right, are: Conference President, Floyd Laurenty, Schenectady (N. Y.) *Union-Star;* Gene Robb, Publisher, Albany *Times-Union;* Harry Shaughnessy, Pressroom Supt., Williams Press, Albany; Conference Treasurer, Granville Hutchinson, Mechanical Supt., Troy (N. Y.) *Record;* Alex MacDonald, Publisher, Albany *Knickerbocker News;* Conference Secretary, Walter E. Lewis, Asst. Supt., Schenectady *Union-Star;* and John A. Burke, former Production Mgr., Gannett Newspapers, Rochester, N. Y. It was announced that the next conference has been tentatively set for next January in Albany.

been started by a few newspaper plants. Currently, the St. Petersburg (Fla.) *Times* and The Milwaukee (Wis.) *Journal* have installed Intertype Fotosetter equipment with which to compose advertising display composition.

Reg Tranter, Mechanical Supt. Boston *Herald and Traveler*, presented a summary of the different phototypesetting machines which have been developed. These include Mergenthaler Linotype Co.'s Linofilm; Intertype Corporation's Fotosetter; The Monophoto machine sponsored by Lanston Monotype Corp., and the Photon which was developed by Graphic Arts Research Foundation but will be manufactured by Photon, Inc. Mr. Tranter used slides throughout his address to illustrate the principles of operation of the various machines.

Up to the moment, the Intertype Fotosetter is the only one of the four machines which is in actual production use. Earl Godshall, Manager of Intertype's Fotosetter Div. stated that there are over 100 Fotosetters operating throughout the country. Of these 70% are being used for offset typographic composition, 27 are being used in letterpress printing plants and 3 are in use in newspaper plants *(Editor's Note* — See *Printing Equipment Engineer* for descriptive articles about Intertype's Fotosetter in March 1952, August 1952, January 1952 and January 1953 issues; for descriptive article about Monophoto machine see November 1953 issue; for complete article about the Photon machine see March 1954 issue; for illustrated article about Mergenthaler Linotype Co.'s Linofilm see May 1954 issue of *Printing Equipment Engineer).*

William W. Garth, President of Photon, Inc., said that currently a job of composing the New Testament is being done with almost four times the speed of the hot metal method of typesetting. He also announced that a Photon machine will be installed at an early date in the plant of the Quincy (Mass.) *Patriot News*. Garth also said that the Photon equipment will be on the market in about 18 months.

George Nelson, Field Representative, of Lanston Monotype Corp., in answer to a question from the floor, with respect to the speediness of phototypesetting stated "The production rate drops on hot metal machines as the point size increases. With phototypesetting however, no matter what the point size, it is possible to compose 200 characters per min. The average on hot metal machines is 160 characters per min. Another feature which facilitates phototypesetting lies in the elimination of molds and other machine parts.

Answers Provided At Smaller Paper Executives' Session

AT THE Non-metropolitan section of the Tuesday night, June 7 meeting, Production Mgr. George Marshall, Portland (Me.) *Press-Herald*, presided. The following panel occupied the platform: Rudolph Kuhner, Press-Stereo Supt., Sharon (Pa.) *Herald;* John N. Barron, Composing Room Supt., LaSalle (Ill.) *News-Tribune;* Earl Caldwell, Stereo Foreman, Sioux Falls (S.D.) *Argus-Leader;* Robert Brooks, Mailroom Foreman, Roanoke (Va.) *Times* and *World-News;* Hans Kraatz, Supt., Altoona (Pa.) Engraving Co., and Don Shortell, Mechanical Supt., St. Petersburg (Fla.) *Times*.

It soon developed that some of the questions at this session were discussed by metropolitan paper executives which was beneficial because the answers can be applied to smaller as well as larger shops. However, the session was provocative of considerable information in reply to questions asked by smaller paper executives.

Ink Mileage Records

It was apparent that not many keep ink mileage records. W. Watson Southam, Executive Asst., Montreal (Can.) Southam Co., Ltd., stated his records showed an average plus or minus ink consumption of 2 lubs. per thousand 8 p. papers.

John W. Park, Production Manager, The Chicago *Tribune* stated that the *Tribune* maintains three sources of ink supply and uses the ink records to keep the suppliers in line on type and quality. He said a very accurate check is made for the month preceding the date for signing new contracts.

Al C. Miller, Pressroom Supt. of the Baltimore *Sun* keeps records and his figures show that ink usage at the Sunpapers' plant averages from 5000 to 5200 pages per lb. of ink.

George F. Marshall, Production Mgr. of the Portland (Me.) *Press-Herald* said he thinks old press blankets are the chief cause of excess usage of inks. It has been his experience that new blankets can often be paid for by the saving in ink consumption.

Fitting Mats and Plates to Space

The question came up with reference to trouble newspapers are having with advertising plate and mat materials received from advertising agencies. One executive stated he sometimes reduces advertisements to required space by making new engravings or by shrinking down the mats. Richard M. Fitzgerald, Production Mgr. of the Worcester (Mass.) *Telegram*, stated that when wrong size ad plates or mats are received, the advertising agency is notified.

Stereotype Supt. George Fuller, Cleveland *Press*, occasionally is compelled to shrink down an advertisement but he doesn't want to do it with 1⅛ in. shrinkage on the classified pages.

One agency man complained of different printed results of the same advertisement in different papers. He enumerated variations in column widths, column rules and variable shrinkages.

Someone asked "What is best formula for stereotype metal?" Earl Caldwell, Stereo Supt. of the Sioux Falls (S.D.) *Argus-Leader*, explained that 6% tin, 14% antimony, balance lead gave good results on his paper for which 53 thousand copies are printed daily.

George Fuller again arose to state he thinks much of the difference in printing quality is due to old presses with worn bearings and that pressmen have as much to do with good printed papers as any other cause for poor printing.

Metal Experiments Abandoned

When asked what results were obtained with 8% tin stereo metal experiments which had been conducted at the Chicago *Tribune*, Production Mgr. John Park stated that a good looking plate was obtained but didn't get wearing qualities from the plates on the press. The experiments were given up.

It was brought out that plates cast from standard stereo metal should produce from 40 to 50 thousand papers.

In answer to a question about TTS tape transmission for 5½ pt. markets and baseball scores, Production Mgr. Harry Evbers, Washington (D.C.) *Post-Times Herald*, reported that when his papers went from 12 pica to 11.4 pica column width, Mergenthaler Linotype Co. cut down the set width of the figure matrices. No trouble has been experienced with AP transmission.

Pressmen's School Held— Officials of Heidelberg Eastern, Inc., conducted an Original Heidelberg Pressmen's School at the new John H. Patterson Cooperative High School, Dayton, O., during that school's opening weeks, Apr. 19-May 10. A Heidelberg automatic platen press for the Dayton school's permanent daytime printing classes was installed. The Patterson High School curriculum is arranged so that each student alternately spends two weeks in class and two weeks working at his trade in one of the Dayton printing plants. Pressmen's School classes, limited to eight or 10 students, have been held by Heidelberg so far in over 38 cities. Members of the Patterson High School Printing Trades Advisory Committee are (left to right): George Darner, Pres., Amalgamated Lithographers of America, Local No. 33; Elliott A. McClelland, Pres., Litho Graphic Service; Gordon R. Rohde, Vice Pres. in Charge of Manufacturing, The Reynolds and Reynolds Co.; Charles B. Hurst, Director of Vocational Education; John W. Taylor, letterpressman, the McCall Corporation; Howard Massman, Printing Trades Coordinator; Lester C. Giele, Pres., The Giele and Pflaum Co.; Walter Wagner, Director of Employee Relations, the McCall Corporation, and Albert C. Wetzel, supervisor of printing division, the Natl. Cash Register Co.

Ink Spraying

The subject of ink misting came up again. Rudolph Kuhner of the Sharon (Pa.) *Herald* thinks that variation in ink misting is due to changes in the weather. He tries to maintain 80 deg. temp. in the pressroom at 35% to 40% relative humidity. The edition is 25 thousand papers which are printed at 27 thousand per hr. Watching the relative humidity helps greatly in reducing ink misting.

Earl P. LaCure, Production Mgr., Elyria (O.) *Chronicle-Telegram,* replied to a question regarding ink misting on a press running at 19 thousand papers per hr. He advised securing the right type of ink for slow speed printing inasmuch as the press rollers would spray ink rather than cause a misting action. If the ink is too thick a thinner should be used.

Partial Page Color

George Woodman, Production Mgr., Ft. Worth (Tex.) *Star Telegram,* inquired regarding color on partial pages. In his plant the color is not shrunk but the black page is shrunk. The stereotype department, said he, "gets hail Columbia" for work that is not up to standard. Vernon R. Spitaleri, Miami (Fla.) *Herald,* stated that in his plant process color is hot molded. The black is cold molded. In using the Milwaukee *Journal* system no trouble is experienced. It seems that in the plant of the Worcester (Mass.) *Telegram,* Production Mgr. Richard Fitzgerald works under a rule whereby the editorial department does not change makeup of the black plate when running process color.

Handling Cuts and Bases

The next question submitted was related to the best method of handling cut sizes in the composing room with respect to saving as much time as possible. One answer to the problem was that a photostat of the cut is sent to the city editor and to the composing room. One executive stated that a dummy is furnished in all cases in which cut sizes are indicated. Another sends a blue print to the stereo room. Engraving Supt., C. L. Bronger, Louisville (Ky.) *Courier-Journal and Times,* scales copy at the time the cut is made and the dimensions are sent to the composing room ahead of time. George Fuller stated that at the Cleveland *Press* a rack in the composing room is supplied with 1 col., 2 col., and up base. When the blue print is received from the engraver the bases are prepared in the form. If there is to be a change in cut size, the change is made in the composing room. John Barron, Composing Room Supt., LaSalle (Ill.) *News Tribune,* discussed the cut handling method in use in his plant. Cherry wood base is used. All bases, in addition to single and multiple column widths are standardized with respect to depth. No one is permitted to change base sizes and cuts are scaled to the standard sizes.

Roll-Up Vs. Powder

Mr. Bronger, in reply to a query about the relative qualities of regular engraving with powder and the Roll-Up process, stated that he etches down 0.0055 to 0.006 in. in the highlights on 65 line screen halftones in from 5 to 7 min. for a full flat by the Roll-Up method. He asserted that with the powder etch method one is bound to get shoulders in the interstices between the halftone dots.

In a previously submitted question, some one asked how you would know when form rollers should be replaced or ground. The answer was short and snappy: "When the rollers swell."

Routing Vs. Etching

Another question submitted from the floor was with reference to the practicability of etching 0.038 in. to 0.040 in. in open areas on line work to avoid routing. Some considered this a practicable procedure but Vernon Spitaleri, Miami (Fla.) *Herald,* asserted that on the average it was faster to rout the open areas than it is to etch them down.

"Startling Progress In Next Ten Years" — Franklin Schurz

AT THE Research session of the ANPA Mechanical Conference on Tuesday, June 8, Franklin D. Schurz, Secretary-Treasurer of the South Bend (Ind.) Tribune who reported as chairman of the mechanical research committee gave a rather optimistic report regarding improvements in newspaper production.

He said: "With the work which is being done in the ANPA Laboratories, coupled with the cooperative research projects on which the manufacturers and the ANPA research staffs have collaborated, the next ten years should produce a startling improvement in the productivity of our mechanical department." He observed that "it is quite probable that greater changes will be made in the next decade than have been made in the past twenty-five years."

Schurz reported, in addition to the many new inventions which will increase the efficiency of newspaper employees others will be offered for sale soon. With respect to the ANPA Research Department he said that at the present time manufacturers in cooperation with the ANPA Research Department are conducting 38 different cooperative programs.

Schurz warned his audience: "Newspaper may expect to find that any big increase in advertising and circulation rates will reduce their advertising lineage and their circulation. A reduction in volume will mean fewer men working in mechanical departments. The alternative is to make use of new inventions, hold down costs, try to expand production."

Following Mr. Schurz's address, ANPA Research Director C. M. Flint, discussed briefly developments at the Easton, Pa., ANPA Research Laboratories. He then exhibited a sound movie in color of developments either sponsored by or developed directly in the laboratory itself.

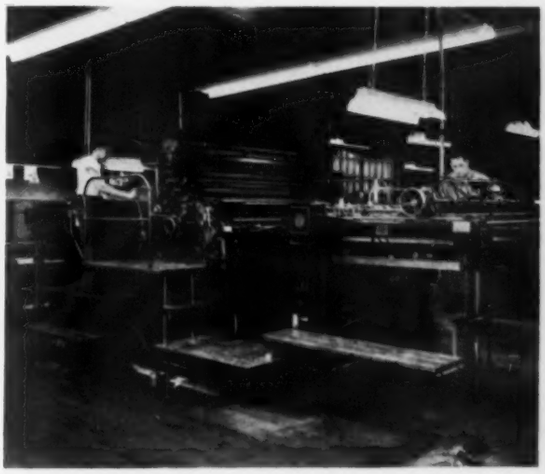
After the showing of the movie, Flint stated that a number of persons or companies are working competitively on the no-pack stereotype mat problem but he hoped the ANPA solution will be the one to be recognized. He also stated that when the no-pack mat method has been perfected it will not be exclusive with any one mat manufacturer. Present use of the no-pack mats method has been consigned to the roller method of molding. In response to a question from the floor, however, he said the no-pack material can be molded by direct pressure if the temperatures are held below 200 deg. F. He remarked that the present backing material used in the process retards shrinkage in proportion to the moisture content of the mat itself. In response to another question, he stated that as many as 20 casts have been taken from one no-pack mat. The no-pack mat provides a mold which will produce a much sharper cast than a cast made from a mat which has been hand packed.

Must Use Two Machines

In answer to a query, Flint stated that at the moment it is necessary to use two machines when etching magnesium combination halftone and line plates employing the Dow-ANPA Rapid Etch method. Research, however, is continuing in an endeavor to simplify the method. Flint also commented that two other interested parties are working on a fast etching method.

PIA Exhibition and Awards

Printing firms are being invited to submit specimens of their advertising in the Third Annual Printing Industry of America's Exhibition of Self-Advertising. Prizes include a total of $3000 in cash and Benjamin Franklin statuettes. A 12 page booklet printed in four colors has been issued which contains the complete instructions and rules. Contest deadline has been set for October 22, 1954. Winners are to be announced at the PIA Convention in Detroit on November 15-19. A copy of the booklet may be obtained by writing Printing Industry of America, 719 Fifteenth St., N.W., Washington 5, D. C., or Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh 33, Pa.



Second ATF-Mann Press Installed—A single color 42 in. by 54 in. ATF-Mann offset press was recently installed at the Greenlee Company, Chicago. The company's first ATF-Mann press, an LP53 Perfector, was installed two years ago, according to General Mgr. Glen R. Holben.

"$10 Million For Newsprint Isn't Peanuts"

DURING the discussion of newsprint at the Atlantic City (N. J.) ANPA Mechanical Conference in June, Leon A. Link, Production Mgr., the Forest City Pub. Co., Cleveland, said: "We have been coming to these metings for years to discuss the problems concerned with newsprint damaged in shipment. The problems have not been solved. Railroad damage has been increasing and the roads are getting rougher all the time. All kinds of palliatives have been proposed, but we won't get relief until someone develops a special type of railroad car in which to ship newsprint.

"We are getting too many flat rolls. Flat rolls add up to considerable overtime all along the line in the mechanical departments . . . The newsprint bill for the Forest City Pub. Co. is around $10 million per year—and that isn't peanuts." Link continued: "We're not interested in collecting the contract price for damaged newsprint from the railroads because we have to consider the potential of that newsprint in advertising revenue."

He added: "If the ANPA Research Laboratory could do something about designing a special car for shipping newsprint it would be a big help."

Immediately following Mr. Link's statement concerning the rough handling of newsprint in transit, Chairman Earl Weiskittel of the Youngstown (O.) *Vindicator* took exception to Mr. Link's comment regarding railroad shipment of newsprint. He stated that the *Vindicator* employs a system which is properly supervised during the time the rolls are unloaded from the cars which prevents any large amount of loss. As a result of the excellence of the system, the *Vindicator* has not filed a claim against the railroads for damaged newsprint over a period of ten years.

Newsprint Handling

Al Rosene, Production Mgr., St. Paul (Minn.) *Pioneer Press* and *Dispatch*, discussed newsprint handling methods in his plant. Among the devices mentioned in handling rolls was a tipping shoe. He mentioned that spotlights aimed at the cores on the reels enables the pressmen to run down a roll until there is only 2½ lbs. on the core. In newsprint waste reduction, eternal watchfulness to keep waste at the minimum is the only solution. Members of his organization hold meetings with railroad officials to find ways and means for reducing rolls damaged in shipment. Among other items he mentioned was that his papers print considerable r.o.p. color, during which they try to maintain the same position in press webs. He concluded: "Supervision, preferably at the source, is the only answer to waste reduction."

Damaged Rolls Refused

John Zajac, Pressroom Supt., Holyoke (Mass.) *Transcript-Telegram*, discussed newsprint handling and waste control. He operates a four unit press with a circulation of 27,000 papers. His paper holds second place in its size ANPA classification. His paper does not accept damaged rolls from the railroad. Since following this policy there has been 1000% improvement in roll damage. Each roll is carefully inspected as received for damage. Care is taken not to deposit rolls too close to each other to facilitate handling from storage to press reel. Among the precautions taken to reduce waste in the pressroom is the custom of disengaging the folder every morning. The roll can also be rethreaded and brought up to the folder without disturbing the web. During the day the webs are cut off and hung above the folder.

Allan Woods, Production Mgr., Garden City (N. Y.) *Newsday*, says there is no one formula for reducing waste in all plants. A waste reduction plan must be tailored to fit each plant. He explained that the *Newsday* newsprint comes by Pennsylvania Railroad and is delivered only 50 ft. from car to plant. Latest roll grab devices are used in shifting rolls by electric truck from car to plant. Woods enumerated the following categories which should be used in formulating a newsprint handling and damage survey in each plant: (1) Transit, (2) Trucking, (3) Warehouse, (4) Handling to pressroom, (5) Handling at presses, and (6) Core waste. He advised that waste can be held down only by close supervision on a continuing basis. In answer to a question, Woods stated he believes the less paper is handled the less waste will occur. In the case of the *Newsday*, the plant is close to the railroad and paper damage is held down by reason of practically living out of the railroad cars which are stationed approx. 50 ft. from the building storage space. He tries to store only one roll out of five for a period of not longer than 6 mo. The *Newsday* storage area is not heated.

Chairman Earl Weiskittel remarked that in the case of the *Vindicator* five newsprint rolls are banded in the center of the railroad car. With the *Vindicator* this type of car loading works best.

In the discussion on carloading newsprint, the unit system was explained. In the unit system 20 rolls are strapped in one end of the car and 19 rolls are strapped in the other end of the car. Experiments are now being conducted with figure 8 loading.

Colored Thimble for Newsprint Run-down

A. W. Harris, Pressroom Foreman, New York (N. Y.) *Times*, reported devising a sleeve or thimble in the form of a colored casting which is inserted into the roll core. In this way, the pressman is enabled to run the roll down to about five layers of paper when the paster is started. He reported that core waste has been reduced from 1.42% to 1.28%.

During the discussion period, a number of executives spoke about newsprint handling in transit and the resultant damage. W. R. Coddington, Mechanical Supt., Chicago *News*, remarked "I never could understand why our companies collect for transit damage and at the same time we are charged for it." Elmer Smith, Pressroom Foreman, Cleveland *News*, thinks newspapers are not getting any better quality newsprint in relation to printability and tensile strength. Henry C. Lentz, Mechanical Supt., Detroit *Free Press*, stated he had reported defective floors in shipping cars which damaged newsprint rolls, after which the railroad corrected the difficulty.

Core Slicer and Cutter

ANPA Research Director C. M. Flint described development of a machine for automatically cutting the remaining paper longitudinally on a core and also slitting it into several widths as predetermined by adjustable slitting knives. The cut-up sheets are used for copy paper, wrappers, scratch pads, and the like.

E. C. Wilberding, Walter Scott & Co., showed a movie taken in the plant of the Hackensack (N. J.) *Bergen Evening Record*. The movie illustrated the Scott high speed flying paster while the presses were operating at 50,000 papers per hr.

Ray LaPierre, Dayton Rubber Co., exhibited slides in which was illustrated the new Dayco Color Separator for use with ROP color printing.

Casselli Fountain

James Casselli, Pressroom Supt., Jamaica (N. Y.) *Long Island Press*, through a prepared address together with projection slides, discussed the Casselli Fountain. The fountain is designed to eliminate ductor roll changes, maintain uniform color at all times during press speed changes, and to minimize ink spray and misting. The pictures showed the fountain in operation in the *Press plant* while operating at 48,000 to 50,000 papers per hr. Walter Scott & Co. is furnishing the Casselli Fountain on all new presses as well as for existing presses now in operation.

Carl M. Noble, Electric Eye Corp., Danville, Ill., made a progress report regarding the Hurletron Electric Eye Register Control when running r.o.p. color.

Printer Purchases Press—Pictured at left is Edward Ross, Plant Mgr. of the Thomas A. Colucci Printing Co., Syracuse, N. Y., inspecting a Speed-Flex Model C press built by Western Gear Works, before it was crated for shipment to his plant. W. R. Puglisi, Vice Pres. of Orville Dutro & Son, Inc., points out features to Thomas Colucci (right). The press is said to be the first to be shipped to central New York State.

Representative of the More Than 1100 Attending the Atlantic City ANPA Mechanical Conference

(All names are identified from left to right in the pictures)

1. Simultaneous conversations are being carried on here by Chas. Fritschi, Parsons & Whittemore, Inc.; W. T. Slusher, Chief Machinist, Roanoke (Va.) *Times* and *World-News;* Joseph Goggin, Newspaper Supply Co.; and Charles Romyns, Hartzell Machine Works.

2. A visit is enjoyed by Carleton A. Braga, Mechanical Supt., Woonsocket (R. I.) *Evening Call*, and Clay A. Wellman, Ludlow Typograph Co.

3. Mr. and Mrs. Benjamin Sugarman at the booth of Consolidated Photo Engravers & Lithographers Equipment Co.

4. A point is being put across by O. T. Cochran, Sta-Hi Corporation, in conversation with Elmer Smith, Pressroom Foreman, Cleveland *News*.

5. Receiving a flower for his lapel (compliments of New England Newspaper Supply Co.) is G. R. Hutchinson, Production Mgr., Los Angeles *Times-Mirror*, from Miss Jean Burke, Ventnor, N. J., while Scotty Campbell, New England Newspaper Supply Co., looks on.

6. In serious conversation at the booth of the recently established Chesley F. Carlson Co. are Harry Eybers, Production Mgr., Washington (D. C.) *Post-Times Herald;* George T. Kempter, Certified Dry Mat Corp.; and Chesley Carlson, Chesley F. Carlson Co.

7. Mechanical executives from the Toledo (O.) *Blade* find interest in a press blanket at Tingue, Brown & Co.'s display. Shown are Joseph W. Meyers, Pressroom Supt., Ralph Ollivier, Engraving Supt., Louis Mauder, Stereotype Supt., and A. B. Kaiser, Mechanical Supt., all of the *Blade*.

8. Linotype Parts Co., Inc., is represented here by Pete Miller, Emil Bendow and William Andreacci.

9. Newspapermen stopping by at the General Electric Co. exhibit found Bruno Damioli, P. Ostaseski and E. M. Stacey, all of G-E.

10. Posing in front of the numerous newspaper mastheads which made up part of Imperial Type Metal Co.'s exhibit are William R. Reed, Publisher, Taunton (Mass.) *Gazette;* Charles Olton, New England Representative, Imperial Type Metal Co.; and Edward R. Cunningham, Composing Room Supt., Taunton (Mass.) *Gazette*.

11. Past and future ANPA Mechanical Conferences were probably the topics being discussed by Walter Wines, former ANPA Mechanical Dept. Mgr., and George Morrison, President, The Morrison Company.

Some of Those Who Visited the Largest ANPA Exhibit of Newspaper Equipment and Supplies

(All names are identified from left to right in the pictures)

12.—Holding a conference of their own are W. Roy Manny, Rolled Plate Metal Co.; William R. Baker, sr., Engraving Supt., McKeesport (Pa.) *Daily News;* and Frank Bonner, Rolled Plate Metal Co.

13.—A technical discussion is being held here by Edward R. Cunningham, Composing Room Supt., Taunton (Mass.) *Gazette;* John Hancock, Fairchild Camera & Instrument Corp.; and Arthur H. Gaebel, Arthur H. Gaebel, Inc.

14.—Carbide-tipped printers' saws were on the minds of Tad Dowling, Cascade Saw & Tool, Inc.; and John E. Potter, Plant Supt., Torrington (Conn.) *Register.*

15.—Arnold Imshaug of Alico, Inc., explains one of his devices to Gordon F. Elrod, Production Dir., Shreveport (La.) *Journal Times;* and Roy Prince, Laboratory Dir., ANPA Research Laboratory, Easton, Pa.

16.—In a huddle are J. R. Riley, C. M. Kemp Mfg. Co., and H. S. Devine, Stereo-Press Foreman, Newark (O.) *Advocate.*

17.—These two swapping information are Ted Gardiner, Chief Machinist, Indianapolis (Ind.) *Star-News;* and Sol Cantor, Fisk Industries.

18.—An interested spectator during the demonstration of Herman H. Sticht Co.'s static neutralizer bar is C. Frank Mann, Composing Room Supt., Louisville (Ky.) *Courier-Journal* and *Times.* The demonstrator is Paul Palmer, Sales Engineer, Herman H. Sticht Co.

19.—G. L. Howe and William H. McCurdy of Gerrard Steel Strapping Div., U. S. Steel Corp., take "ten" at their company's exhibit booth.

20.—Harry Little of the Huck Company greets George Bauer, Chief Machinist; Everett Hall, Pressroom Supt.; and Chas. M. Kirk, Stereotype Supt., all of the Detroit *News.*

21.—The camera catches informal meeting held by Pres. H. G. Willnus, Intertype Corporation; Albert R. Hanley, Composing Room Supt.; and Reg W. Tranter, Mechanical Supt., both of Boston *Herald-Traveler.*

22.—The group looking at the cameraman here are identified as Jack Innis, Stereotype Foreman; Ted Gardiner, Chief Machinist, both of Indianapolis (Ind.) *Star-News;* H. P. Blodgett, jr., Representative; W. H. F. Thompson, President, both of Monomelt Co., Inc.; and Gordon F. Elrod, Production Dir., Shreveport (La.) *Journal Times*

23.—Observing the Fairchild Scan-a-sizer in operation are Frank Parker, Mechanical Supt., Staten Island (N. Y.) *Advance;* and Claude Keller, Fairchild Camera and Instrument Corp.

24.—Some of the representatives of Chemco Photoproducts Co., Inc., who attended the ANPA Conference were H. K. Marshall, Sam B. Anson, jr., Thomas Henderson and Harold Larsson.

Color, Inspection and Research Dominate R&E Council Meeting

By STAFF WRITER

COLOR reproduction and research progress in the Graphic Arts industry were the dominant themes at the 1954 Meeting of the Research and Engineering Council held at Hotel Harris, Kalamazoo, Mich., on Wednesday and Thursday, May 12 and 13.

The Wednesday morning May 12 session was devoted to a combined meeting of the Executive, Planning, Publications and the Ways and Means committees. The Wednesday afternoon, May 12 session was devoted entirely to research reports throughout the country, in which research projects under consideration or already completed were discussed. The Thursday, all-day session was devoted to a number of papers related to color photography and color printing. While Friday, May 14 was not considered a part of the officials proceedings of the 1954 Annual Meeting, yet a number of trips to paper and processing plants in the vicinity of Kalamazoo were arranged for and taken advantage of by a goodly number of those attending the Council and Council's Annual Meeting.

Elliott Donnelley, Exec. Vice. Pres., R. R. Donnelley & Sons, Co., Chicago, served as General Conference Chairman. His ready wit and good humor got each meeting off to a good start.

Solvents and Cleaners

A report of the committee on solvents and cleaners which is headed by C. M. Flint of the ANPA Research Laboratories was read. The investigation is taking place at Pratt Institute, Brooklyn, and is better than half completed.

Painting and Lighting

The painting and lighting committee through Philip E. Tobias of Edward Stern & Co., Philadelphia presented an interim report. The committee has held several meetings and has sent out a questionnaire on the subject to plant executives. It is an objective of the committee in its report to define industry practice and needs in color matching.

Color Control During Printing

Perhaps the one paper which created the most interest at the Council Meeting was that entitled *Control of Color During Printing* which had been prepared by one of the engineering staff in the Industrial Engineering Div. of R. R. Donnelley & Sons, Chicago. The paper was read by Edward Busby, a Donnelley Vice President. The subject of the paper read by Mr. Busby was concerned with maintenance of color quality throughout press runs. Through the use of slides Mr. Busby explained how the new quality control method is operated in the Donnelley plant. Busby stated that variation exists in all manufactured products. But the real problem is to find out the total range of this variation.

The inspectors consist of girls taken from the bindery who have had five years or more experience and who through aptitude tests show themselves capable of performing the inspection job. "Obviously," he said "we can't inspect every signature on the entire run to find out about the color variation. At most we can look at a very small percentage of the job . . . in order to insure our getting a truly representative sample, find schedules for 15 min. inspection intervals were made up. He exhibited a typical schedule extending from 8 o'clock to 8:15 o'clock. He explained that several of the schedules are in use so that there is no regularity in time for taking samples for inspection.

He explained the ratings which are as follows: (1) The color key represents what the customer wants and expects; (2) Maximum heavy is the signature that represents the heaviest we would allow the color to go and still be acceptable. This is a fence on the heavy side of the OK, and (3) Maximum light is the signature that represents the lightest we would allow the color to go and still be acceptable. This is a fence on the light side of the OK. The ratings are determined by comparing a sample signature with the standard. This comparison results in quite possible ratings as follows: OK, acceptable light, acceptable heavy, non-acceptable light, and non-acceptable heavy.

The procedure is as follows: (1) Compare sample signature with the color OK. If it is a good match then the signature is rated OK.

(2) If the sample is heavier than the color OK, then the signature is compared with the maximum heavy standard. If the signature is no heavier than that sample, it is rated acceptable heavy; if it is heavier, it is rated non-acceptable heavy.

(3) If the signature is lighter than the color OK, then it is compared with a maximum light standard. If it is no lighter than that standard color then it is rated acceptable light: if it is lighter it is rated non-acceptable light.

The ratings of each page are charted at the press so that the pressman is immediately informed of the independent inspection result. The charts are prominently displayed at the press so that the pressman and his crew, as well as his foreman, can see the results of all the inspections. At the end of each run a summary report is made and this is distributed to all levels of management up to the executive in charge of manufacturing operations.

Busby explaines that Donnelley wants to use persons for inspectors who really know almost nothing about printing. As explained above, they are selected from among competent bindery girls who having passed aptitude tests, and as a result see quality the way the company wants them to see it and the way in which it is believed the customer will see it.

He continued: ". . . they add a certain amount of glamour to the pressroom and they are awfully hard for a pressman to argue with." In answer to a question, Busby stated that the satistical quality control method is not designed to take away from any pressman his responsibility or skill nor does it take away any responsibility from the press foreman or the pressman himself. Responsibility must be maintained by the pressman. The girls employed as inspectors have no authority —they merely report defective work.

Edward Busby further explained that the system for controlling color during printing production still is highly experimental. There are a number of problems to be worked out to bring the system in line with respect to quality and manufacturing costs.

Color and Electronics

John S. Odell, Products Administrator, Color Correction Project, Radio Corp. of America, Camden, N. J., presented a review of the use of electronic techniques in the field of color in photography and printing. He emphasized the inter-relations between color TV and color in the

Triebe Honored by Research and Engineering Council at its Fourth Annual Meeting Held in Kalamazoo, May 12—Edward J. Triebe, (left), Kingsport (Tenn.) Press, retiring President of the Research and Engineering Council, receives engrossed testimonial in recognition of his distinguished service to the Council from John H. Davis, jr., Judd & Detweiler, newly elected President. Others in the group (left to right): Vice Pres., Felton Colwell, Colwell Litho-Products, Inc., Minneapolis; retiring Vice Pres., Elliott Donnelley, R. R. Donnelley & Sons Co., Chicago; Secy., J. Homer Winkler, Battelle Institute, Columbus, O.; Treas., Joseph Schwartz, Westcott & Thomson, Inc., Philadelphia; (Missing from picture is Council Vice Pres., Samuel F. Chernoble, The Comet Press, Inc., New York, N. Y.)

Speakers at Research and Engineering Council's Color Conference, Kalamazoo, May 13—(left to right): Martin Galbraith, Sutherland Paper Co., Color Conference Committeeman; Speakers: Edward B. Busby, Vice Pres., R. R. Donnelley & Sons Co., Chicago; Henry D. Ferguson, Vice Pres. in Charge of Research, Lawter Chemicals, Inc., Chicago; John S. Odell, Products Administrator, Color Correction Project, Radio Corp. of America; Ralph M. Evans, Director, Color Technology Div., Eastman Kodak Co., Rochester, N. Y.; Francis L. Wurzburg, jr., Sales Engineer, Printing Ink Div., Interchemical Corporation, New York, N. Y.

Graphic Arts. He expressed an interesting thought when he said: "Most people seem to feel rather certain that color television will serve to further accelerate the trend toward color in the Graphic Arts. It seems unlikely that an advertiser will want to see his product displayed in full color on television without a shift from black to color in a publication . . . Similarly, I feel that as color television becomes general, even the editorial matter of publication work will follow the same trend."

With respect to employment of electronics in the Graphic Arts industry, he stated that the big advantage in the use of electronics is speed, elimination of operator fatigue and variability and the possibility of amplification and therefore high sensitivity.

Speaking prophetically, he stated: "It is conceivable that a device could be constructed that would scan the web on a four-color press and automatically control the flow of ink from the fountains so that the reproduction quality would not change during the run—not tomorrow but someday."

Seeing Light and Color

Dr. Ralph M. Evans, Director, Color Technology Div., Eastman Kodak Co., Rochester, N. Y., discussed the different color effects comprehended by people when colors are viewed under different predominanting color conditions. Color visualization said he is purely mental. He proved his many points through the use of a liberal number of slides.

More Brilliant Color Printing

Henry D. Ferguson, Lawter Chemicals, Inc., Chicago, presented a comprehensive review of the various types of fluorescent materials, their physical and chemical differences, uses and methods of printing. Ferguson explained that fluorescent materials may be subdivided into two groups (1) Blacklight fluorescent compounds and (2) Daylight fluorescent compounds. By simple definition, he said, fluorescence is an admission of light that lasts only as long as an exciting or activating source is present. Fluorescent chemicals have no useful afterglow. They differ in this regard from phosphorescent chemicals which do have a useful afterglow.

Ferguson stated: "Experience has shown that the only way to obtain maximum brilliance since you cannot crowd ink pigment in laterally is to stack it in vertically. In other words, film thickness is the controlling factor. It has been proved that peak brightness is obtained by laying down films from 1 to 1¾ mils thick. Screen process is the only printing method I know of, excluding the specialized bronzing method, that will deposit such films." He continued: ". . . we cannot achieve full brilliance in daylight fluorescent printing by mechanical printing methods. However, there are hundreds of places where full brilliance is not necessary — where three-quarter or one-half brilliance is quite satisfactory. It is in this area that the great advances have been and will be made in the magazine field, indoor displays, greeting cards and packaging field."

Paper as it Relates to Color Printing

William A. Kirkpatrick, Vice Pres. and Tech. Dir., Allied Paper Mills, Kalamazoo, Mich., discussed interestingly a paper entitled *Paper as it Relates to Color Printing*. During the course of his talk, he stated: "The growth and tremendous technical strides made in the wet process of multi-color reproduction has brought about some significant change in paper qualities. It is well known that inks used in these processes must be of controlled viscosity, tack and drying qualities. Of particular interest to papermakers is the tackiness of the first ink down. This is far greater than that of inks used in one color work and demand that paper service considerably stronger than would be necessary on one color work."

Mr. Kirkpatrick stated that best results from the appearance standpoint will be obtained when color printing is done on papers of maximum brightness. Unfortunately, he said, the cold blue-white sheet has caught many a printer's fancy at least partially as a result of promotional activities in the field of paper sales. Actually, black and white reproduction is apparently better on a sheet which is not blue-white because contrast with black inks, most of which contain blue toners, is better when this ink is laid on a cream white or a pink white surface. In color printing, reproduction is more accurate if yellows and transparent reds are laid down, on a background lacking in a dominant blue tint. A blue tint can make a yellow appear green and muddy and a red will lose its brilliance in running toward the magneta.

Process Printing and Inks

Process Printing and Inks was the subject of the paper delivered by Francis L. Wurzburg, Jr., Sales Engr., Printing Ink. Div., Interchemical Corporation, New York. Wurzburg's address was illustrated by many slides related to the charting and color measurement of inks by the use of the recording spectrophotometer.

Plant Visitation

The following plants were visited on Friday, May 14 by those who remained over after the Council Meeting had adjourned: The Allied Paper Mills, Kalamazoo Vegetable Parchment Co., Sutherland Paper Co., Inc., and Upjohn Company.

Amazing Activities In Research Work In Printing Industry

AT THE Wednesday afternoon, May 12 session of the R&E Council in Kalamazoo, Mich., the entire meeting was devoted to the presentation of reports received from research organizations on a nation-wide basis. In other words, the reports indicated the objectives which were being worked upon and those which had been completed. The purpose of making the reports to the Research and Engineering Council is to avoid duplication of effort in the Graphic Arts. As the reading of the reports progressed it became evident that an amazing amount of research and developmental work is in progress throughout the country.

J. Homer Winkler, Technical Advisor, Battelle Institute, Columbus, O., presided as moderator. A number of reports were made in addition to those read by Winkler.

ANPA Research

The first report to be read was received from Research Director C. M. Flint of the ANPA Research Dept. Objectives which have been accomplished are as follows: (1) Plastic Stereotype Molding Blanket: improvements in the blanket to stabilize it over wider temperature ranges have been accomplished. (2) Because of lack of acceptance by the industry, Flint reported that the automatic plate router has been placed in the inactive classification. (3) The ANPA has developed a slitter and sheeter which will strip and slit newsprint cores of the small remaining amount of paper left on roll cores into varying widths. With the paper rewound on the rewind cylinder, the cylinder is locked in place and a knife traverses the cylinder to cut the roll into sheets. (4) Ad-Mark is a non-pigmented liquid in various colors which is used to identify type matter for identification or for re-run purposes. This product is marketed by Eastern Newspaper Supply, Inc. (4) The Wire Tying Butt Welder, developed in cooperation with the DoAll Company has modified a portable DoAll butt welder for salvaging waste wire used in wire tying machines in newspaper mailrooms. Reduction in wire waste is estimated at 75%. The device is marketed by the DoAll Company. (6) The depth measuring microscope has been developed with the cooperation of Bauch & Lomb Optical Co. It is used for measuring molded depth of stereotype mats and the depth of the non-printing

areas of all printing plates. (7) A bench type and a hand-held gauge have been developed for measuring linecasting machine slug height. Marketed by Alico, Inc. (8) A web tension control system for printing presses developed in the ANPA Laboratories will be manufactured by Wood Newspaper Machinery Corp. (9) In cooperation with American Type Founders and New York's Comet Press, dry (relief) offset is being worked on to apply the process to high-speed web-fed presses. (10) In cooperation with Dow Chemical Co., the ANPA Laboratories has developed a technique for rapid etching of magnesium halftone, line and/or combination halftone and line plates. (11) The ANPA No-Pack stereotype mat is in successful field tests at the South Bend (Ind.) *Tribune* and at the Allentown (Pa.) *Call and Chronicle*. The remaining problem is to establish manufacturing process control of the material used to pack the mat.

20 Sec. Ink Drying

A new technique for rapid drying of protective and decorative coatings of inks, paints and varnishes has been developed by Armour Research Foundation under sponsorship of the Meyercord Company. The Chem-Dry process was reported to have almost limitless uses in printing, wood finishing, paper and fabric coating, metal decorating, wire coating and glass and cloth processing. Drying and handling time has been shortened to from 2 to 20 sec. Only one coat is needed and the original coat dries so rapidly that it has no time to be absorbed by the base material. In the drying machine, coated material resulting from printing, roller coating, brushing, spraying or dipping operations is conveyed into a chamber through which a mixture of sulphur dichloride vapor and air is circulated.

Economical Lithographic Plate

A process which is expected to provide economies in preparing lithographic plates has been announced by the Ceramics and Minerals Research Dept. of Armour Research Foundation. The process provides a surface on thin sheets of ordinary steel which can be used to receive the photosensitive printing film used in offset. The surface is similar to natural lithographic stone and may be curved around the press plate cylinder.

A new method of printing designs on ceramic tile has also been developed by Armour. A halftone rubber printing plate is mounted in a press and adapted to the application of a mineral colorant oxide to the surface of ceramic wall tile in a continuous process. This provides an economical mass production method of applying either background color or design color, or both. The same procedure has been adapted for use in printing from a roller press.

Paper Stereotype Mats

Armour is engaged in research for a method of coating paper mats used for casting type metal. The coatings used in the research so far are designed to lay the surface fibers and protect them from the action of the metal.

GPO Research Progress Report

One of the most interesting GPO Research developments was reported by Technical Director Morris Kantrowitz. The incorporation of a water emulsion of triethanolmine containing approx. 6% water considerably reduced ink misting in book and news inks used on presses at a speed of 15,000 i.p.h. Other reported GPO research developments were: An auto-

(*Continued on Page 46*)

Philadelphians Prepare for Craftsmen—A committee composed of members of the Philadelphia Craftsmen's Club is now putting the final touches to the four day program arranged for the International Craftsmen's Convention being held at the Bellevue Stratford Hotel in that city, August 8-11. Raymond H. Miller, sr., is General Chairman in charge of all convention activities. One of the highlights of the annual meeting will be a talk by a buyer of printing on what he expects in quality and service from the printer. There will be interesting clinic discussions on photocomposition, letterpress presswork, dry offset, screen process and flexographic printing. The new RCA Color Scanner will form the basis for another talk.

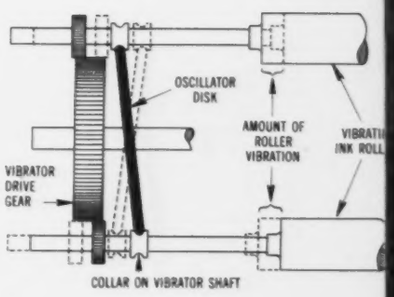
The Convention Committee is shown above at one of its planning meetings. Seated, from left to right: Raymond Phyle, Innes & Sons; A. Davenport, Globe Ticket Co.; Robert B. Harrison, Bingham Bros. Co.; Edward Wallace, Garrett-Buchanan Co.; Ralph DeKalb, Alfred F. Jordan Co.; Co-chairman Walter Morowski, North American Composition Co.; General Chairman Miller; Samuel J. Mink, W. B. Saunders Co.; William Hicks, Miller Printing Machinery Co.; Matt Colfer, American Type Founders; Walter Scarborough, Cuneo Press; Harold Lyle, Allen, Lane & Scott; David H. Siegfried, David Siegfried Co.; and Harry Seeburger of Arndt, Preston, Chapin, Lamb & Keen. Standing, from left to right: Lew Breswick, Periodical Press; Alfred T. Snowden, D. L. Ward Co.; George Stiteler, Ideal Roller & Mfg. Co.; and Eugene H. Davis, Printing Ink Div., Interchemical Corporation. Registration fees are $25 for men; $15 for women.

HARRIS

Harris vibrates the ink rollers with a simple metal disk—and everybody profits

One of the big reasons why the Harris inker lays a smooth, uniform film of color on the plate like no other inker can, is the regular, oscillating motion of the vibrator rollers. To give these rollers a positive action back and forth across the inker—in correct rhythm—Harris engineers developed a special oscillator disk. It is surprisingly simple, yet is so basic an improvement that it was awarded U. S. Patent No. 2,520,688.

The sketch shows the principle. Since the disk is inclined on its shaft, it describes an oscillating path as it rotates. This oscillating action is then transferred directly to the vibrator rollers.



Pressman's profit: better inking—easier

Driven from the main press gears, the vibrators oscillate once for every two revolutions of the printing cylinders. This produces an optimum vibration speed for proper distribution and even build-up of ink. Each vibrator changes direction at a different time in the cycle—an absolute must for good distribution. The operator can easily adjust the vibration stroke from zero to maximum for different kinds of ink and different kinds of jobs. With the Harris vibrating system, the pressman can get better ink lay with less fussing and fuming.

Foreman's profit: steadier production

There are five vibrators (plus an auto-vibrator) in the patented Harris inker. Vibrating them could have required a very intricate mechanism. But the Harris oscillator disk solves a problem of involved mechanical motion with sheer simplicity and soundness of design. It has very few parts, requires very little maintenance. It is one of the many shop-tested features that keep a Harris running with less down time.

Plant owner's profit: more sheets to sell—at a better price

The Harris vibrating system helps lay a more even film of ink across the full width of the plate. It minimizes "starving" of certain parts of the plate. These things add up to more good sheets in the delivery pile—premium-quality sheets that command a buyer's respect—that command top dollar on the market.

* * *

The design and manufacture of soundly engineered graphic arts equipment is the business of Harris-Seybold. Products include Harris offset presses, Seybold power paper cutters, Cottrell letterpresses and gravure presses, Harris litho-chemicals, Macey collators, and other fine graphic arts equipment. Consult Harris-Seybold Company in all principal cities, or at 4510 East 71st Street, Cleveland 5, Ohio.

HARRIS-SEYBOLD

fine graphic arts equipment . . . for everybody's profit

Harris Model 145A, single-color, 35 x 45" offset press at Great Lakes Lithograph Company, Cleveland, Ohio. Color photograph by Cornelius.

R&EC Meeting

(Continued from Page 43)

matic casing-in machine for production of memorandum books at 3000 books an hr.; new adhesive for adhering the end signatures on the Smyth book sewing machine; development of a three-solution organic compound for washing offset rollers which will impart detergent properties to the solution; a tape for stripping offset negatives; formulations of resinous adhesives for use on Smyth and Sheridan casemakers, and a number of other objectives.

Institute of Paper Chemistry

A summary report of research conducted by The Institute of Paper Chemistry on behalf of the American Newspaper Publishers Assoc. were study of ink receptivity dealing primarily with newsprint and news ink; study of smoothness of paper dealt primarily with application of the Chapman printing smoothness tester, and the investigation of surface bonding strength has led to development of a research instrument for studying the factors involved in the picking of papers.

Intertype's Research

Research Engineer George J. H. Sausele reported that Intertype Corporation continues to expand its research program. Among the objectives he reported work on development of an auxiliary machine to provide improved tolerances on type height. An automatic Desk Model Fotosetter was completed. This machine can be set to rephotograph a line automatically any predetermined number of times in composing type and rule form work. The design of an automatic quadding and centering device for the Floor Model Fotosetter is nearing completion. Wider measures for insurance forms have been achieved by extending the range of Fotosetter composition considerably beyond 42 picas.

Fred'k H. Levey Co. Research

The Fred'k H. Levey Co. reported research and development work. Among the major items are: Development of a series of Flashset wet process inks for use on high speed web-fed offset presses. Fluorescent gravure inks for commercial use have been developed. Rubber plate inks specifically designed for use on Levey's high speed rubber plate rotary presses were introduced.

The Machine Div. of the Levey Company working with printers and publishers has designed a number of major items. Among them are a high speed four color electrotype proof press; a high speed double five color common impression cylinder type of web offset press; a lock-up for stainless steel plates for offset presses which tightens the plates from both ends, permits tilting plates and only takes up ½ in. of the cylinder periphery. A number of other accomplishments were reported. Also, the Levey Plate and Chemicals Div. has developed an improved line of chemicals for offset plate use, and specifically for Aller plates; a more direct method of making Aller plates from positive film; a tri-metal plate which is basically a chromed Aller plate designed for exceptionally long runs and which can be stripped of chrome when desired and used as a standard Aller plate.

Mergenthaler Research

Mergenthaler Linotype Co.'s research and developmental report indicated that the company research work is directed toward continual improvement of present products, and the development of completely new products. Research work, however, has not been exclusively technical. Work is taking place in the long range task of developing economic comparisons of alternative processes for manufacturing printed matter with special emphasis on the economics of photocomposition. This includes data on newspaper makeup techniques. Mergenthaler's Research Group is developing new methods, systems and tools for makeup of all types and in all media. The goal is to reduce the cost of ad and display makeup in many classes of publication printing. In the field of photocomposition an important milestone was reached in the development of the Linofilm, the pre-production model of which was exhibited at the factory in April for the first time. It was stated in the MLCo. report that "It is a matter of policy that when our new line of phototypesetting machines reaches the market, fully developed corrective devices and all other supplementing equipment, processes, and supplies will also be available."

MMM Research Progress

Minnesota Mining & Mfg. Co. reported that real progress has been made in four programs to provide tools for better printing at lower cost. The first of these is an improved two ply glass sphere coated draw sheet for the newspaper printer which reduces first impression offset and provides an improved printing surface.

Pre-sensitized Photo-Offset plates in sizes up to 25½ in. by 36 in. are now available. Characteristics of the plates are speed in processing, freedom from scum or oxidation in handling, sharp faithful reproduction even when printing 300 line work and freedom from stretch. Work on inexpensive dampening roll covers is progressing. A letterpress makeready sheet has been developed. It was stated in the report that the sheet will reduce significantly the time required to makeready halftone and mixed copy printing. The sheet is processed by printing upon it with conventional black ink and then exposing it for less than a minute in a special unit, after which the sheet will apply increased pressure to the solids in proportion to the amount of solid tone.

NIPRI Research

Dr. William C. Walker, Associate Director, National Printing Ink Research Institute, Bethlehem, Pa., made a brief oral report regarding the Institute's current work. He said that most of it was basic. It is difficult in some instances to sell research to management. Work on ink-paper relationship of direct interest to the printer is progressing. Problems in ink picking are also being studied.

Springdale Laboratories

The Springdale Laboratories, Div. of Time, Incorporated, presented an interesting report concerning the research work currently being carried on at Springdale, Conn. Work is being concentrated in the letterpress field. Improved engravings are expected to result through the use of electronically controlled scanning techniques have been developed and proved in production by engravings made in the laboratory pilot plant. The work of engineering a high speed multipurpose letterpress was made possible by development of the laminated plate, internal lockup plate cylinder and new ideas for high speed ink carriages, driers and folders. Work on the experimental prototype machinery is a joint Goss Printing Press Co.-Time, Incorporated venture. Development of bindery machinery to handle the product of high speed presses is being evaluated at Springdale with the Dexter Folder Co. jointly. Some of the developments have been used regularly in the production of *Life* magazine. Also, some 1500 T. of lightweight paper, in which is employed a calcium silicate filler has been manufactured on a pilot plant basis. This 40 lb. sheet is of the same desirable characteristics as the 45 lb. sheet now in use.

R. Hoe & Co., Inc., printing press and saw manufacturer, announced that its entire plant and office will be closed for summer vacation from July 26 to August 7, inclusive, and will be reopened Monday, August 9.

No shipments will be made during the vacation period except to meet extreme emergencies and no deliveries will be accepted during this time.

Albert H. (Jack) Parks, former president of Cline Electric Mfg. Co., died June 21 in his Ottawa, Ill., residence. He first suffered a stroke in February, 1950. Parks joined the company in 1917 after graduating from the University of Illinois as an Electrical Engineer. He designed control equipment for the printing industry, and worked with engineering and sales of company equipment to the printing industry. Parks was elected president in 1947.

Robertson Builds New Plant—Officials of Robertson Photo-mechanix, Inc., are shown inspecting blueprints at site where construction has begun on a plant which will enlarge the firm's production facilities. From left to right are Leonard S. Florsheim, jr., President; Joseph Vancata, Asst. to the Pres.; and D. Franklin Keller, Chairman of the Board. The plant, which is being built outside of Chicago in Harwood Heights, Ill., will be used initially by the Research and Development Div. of the company, as well as the New Products Mfg. Dept.

Printer to be Helped by Scientific Studies

By STAFF WRITER

MORE than 200 technical, scientific and research minded men met recently in Milwaukee, Wis., for the Sixth Annual Conference of the Technical Assoc. of the Graphic Arts. Amid references to isoptical density lines, chromaticities, saturation in luminance, polygons, non-circular gears and radiotracer techniques, the highly scientific TAGA group listened to 22 papers delivered on recent studies and experiments which related directly to the Graphic Arts industry.

The Milwaukee TAGA meeting was planned under the direction of its President, Richard F. Shaffer, Head of the Chemical Engineering Dept., Pratt Institute, Brooklyn, N. Y., and Convention Chairman Jack L. Roser, Supt. of Lithography and Rotogravure, Milprint, Inc., Milwaukee.

Officers Elected

New officers elected at the Conference for 1954-55 are as follows: President, G. L. Erikson, Exec. Vice Pres., Braden Sutphin Ink Co., Cleveland; First Vice Pres., Dr. Paul J. Hartsuch, Lithographic Consultant, Interchemical Corp., Printing Ink Div., Chicago; Second Vice Pres., Robert E. Rossell, Chief of Map Reproduction Branch, Engineer Research and Development Laboratories, Ft. Belvoir, Va.; and Secretary-Treasurer, George S. Hammer, Quality Control Mgr., Forbes Lithograph Mfg. Co., Boston.

It was announced at the annual business of the Association that the 1955 Conference will be held at the Somerset Hotel, Boston, Mass, May 9, 10 and 11. In charge of local arrangements for the meeting will be Merrill Friend, Technical Director, Spaulding Moss Co., Boston.

The first technical session, under the chairmanship of Philip E. Tobias, Edward Stern & Co., Philadelphia, heard a talk on *Tone and Color Control in Reproduction Processes* by W. L. Rhodes of the Graphic Arts Research Div., Rochester Institute of Technology, Rochester, N. Y.

Tone and Color Control

Confessing that they had encountered more difficulty controlling tone and color on the press than with any other operation, Rhodes described an instrument developed at RIT for dealing with ink film thickness and sharpness. It consists of a traversing head containing a light source and photocell. The photocell output is amplified and used to operate a gauge.

To use the instrument, known as the Ink Distribution Meter, the pressman removes a sheet from the delivery hopper and places it under a foot which is marked to correspond with the fountain keys. The head traverses the sheet and the lights on the gauge signal the densities of the color. Rhodes stated: "*In tolerance* is indicated by a green light, *too low* by an orange light and *too high* by a red light." This permits the pressman to mark the sheet in the appropriate areas and to use this information in adjusting the fountain keys.

Rhodes also mentioned another device which he referred to as a "fur-lined" color separation printer. Its principal features are a pin registration system for quick registering of masks. The filters are changed by pushbuttons and are balanced so that exposure times for all three separations are equal.

The importance of the halftone reproduction of gray, pertinent to all color reproduction processes, was explained by H. B. Archer, also of RIT's Research Div. Archer pointed out that the photographic requirements for reproducing the gray scale vary with printing conditions. Gray reproduction requirements are determined by the kind of paper to be used, type of plate, inks to be used and the process by which it will be run.

Urges Use of Densitometers

A paper on *Measurement of Dot Area and Sharpness* was presented by D. J. Howe of Eastman Kodak Co. Declaring that optical density is not a satisfactory measurement for halftone negatives, Howe encouraged the use of densitometers as control instruments to perform this operation. He explained that the steps in the halftone process depend upon the reproduction of areas rather than densities so the tones do not depend upon the exact nature of the response of the photosensitive materials.

The speaker disclosed there are development effects in photographic emulsions which tend to change the size of the dots, and have no relation to the distortion of dot size which takes place in making a printing plate. These effects, he said, are more serious for small dots and therefore affect the highlights and shadows more than the middletones, and finer rulings more than coarse rulings.

Electronic Correction Reviewed

A review of the RCA Electronic Color Correction process was presented by J. S. Rydz of Radio Corp. of America. Briefly, the copy, either transparent or opaque, is photographically separated through three conventional filters. Separation positives obtained from the separation negatives are then registered with respect to each other in the RCA equipment. These separations are the input red, green and blue information from which corrected cyan, magenta, yellow and black photographic negatives are derived. Rydz said that a wide latitude of photomechanical processing techniques is possible following this process because of the tone compensation circuit installed in the recording equipment.

Chairman of the second technical session was John A. C. Yule of Eastman Kodak Co. Speakers on the program included Joseph G. Jordan, Springdale Laboratories, Time, Inc., Springdale, Conn., whose topic was *New Tools for Research in Color Reproduction*, and Philip E. Tobias, Edward Stern & Co., Inc., Philadelphia.

Color Aptitude Tests

A highly interesting talk on *Testing Color Aptitudes of Prospective and Actual Printing Production Employees* was given by Donald Macaulay of Paper Quality Control, Inc. Mr. Macaulay explained that the basic aim of the test is to determine the color skill, both actual and potential, of industrial workers whose jobs require them to make rapid and accurate judgments of color matching.

The test consists of having the worker match 40 different colors on a small board against an equal number of plastic color chips of the same values and hues. He revealed that the test results are most satisfactory when the lighting and intensity are the same as those under which the chips were standardized. Illumination of North daylight at 50 f.c. is desirable, he said.

Later in his talk, Macaulay related that presidents and other executive personnel of companies tested drew the lowest scores in the color tests. Quality control men, he noted, were the best in the testing. He added that some plants have a better testing record among workers employed on the night shift than those working during the day. During the discussion

Two Seek High Craftsman Office—At press time, two candidates emerged with campaigns for election to the office of Third Vice Pres. of the Intl. Assoc. of Printing House Craftsmen. George Wise of Cleveland, O., and Ferd Voiland, jr., of Topeka, Kan., have organized forces looking to election at the Philadelphia Convention of the International, August 8-11. Both candidates have been endorsed by their respective Craftsman districts.

GEORGE WISE

FERD VOILAND, jr.

Wise, popular Cleveland printer, has made substantial gains in International membership through his thorough work on the Intl. Membership Commission for the past three years. He has been Chairman of the Commission for two years. Wise also boasts a fine local club record having headed both the Cleveland and Pittsburgh Craftsmen's Clubs as their president. His business connection is as Partner-Superintendent of Dugan-Millis, Inc., Cleveland combination printing firm.

Voiland, who is State Printer of the State of Kansas, gained prominence in International Craftsmen ranks for his promotion of Printing Week on a country-wide basis. He served for two terms as Intl. Printing Week Chairman. Much of the current attention given to this annual observance is credited to Voiland's promotional efforts. He prepared and issued the Printing Week Manual of Procedure and originated the Printing Week Objectives. He is a graduate of Kansas State College and a member of the Topeka Craftsman's Club.

period, the speaker revealed that only five out of every 75 persons tested are classified in the excellent category.

Other interesting revelations by Macaulay dealt with the possibility that two individuals having identical retinal sensitivity would show different degrees of color skill. A small difference between colors, which will be rejected as a mismatch by one individual, will be accepted by another as inconsequential. In one plant he described, a modest contest was made of the color testing and each shift with the best score received a $25 savings bond.

Photo Resist Lacquer

Kodak Photo Resist, a light sensitive lacquer which may be applied ahead of time to offset plates, was described by L. E. Martinson of Eastman Kodak Co. This was described in the December 1953 issue of *Printing Equipment Engineer*. A method that involves the simultaneous deposition of copper as a modifying agent for vinyl plate lacquers, was described by Grant C. Beutner, Western Printing and Lithographing Co., Racine, Wis.

Xerographic Offset Plates

The third session of the Conference was presided over by George W. Jorgensen, Lithographic Technical Foundation, Chicago. The first presentation was made by O. A. Ullrich, Battelle Memorial Institute, Columbus, O., on *Metal Lithographic Plates Prepared by Xerography*. Ullrich reported the development in the laboratory of a metal offset plate prepared by the Xerographic process. He said such plates appear good enough for use in printing military topographic maps. At present, the process is suitable only for reproducing line subjects and additional work will be required before they can be used for halftone reproduction.

In this process, an electrostatic image is created on a selenium-coated plate by exposure to a light image. The electrostatic image is developed with a dry powder, and the powder image is transferred electrostatically and fixed to a grained zinc plate. The entire operation, Ullrich claimed, can be completed in about 5 min. He also stated that plates as large as 27 in. by 30 in. have been made.

The recently developed method for etching magnesium printing plates was explained to TAGA members by John A. Easley of Dow Chemical Co. A description of this technique appeared in the December 1953 issue of *Printing Equipment Engineer*.

Eliminating Powdering Operation?

Daniel L. Goffredo, American Newspaper Publishers Assoc., next told of a process "still in the laboratory curiosity stage" which is designed to eliminate the powdering operation in photoengraving. He said the engraving metal used in the tests was a copper-plated zinc. The copper is stripped from the open areas to provide a copper relief plate.

Goffredo explained that the exposed zinc is spray etched with a copper sulphate solution. The sides of the relief image are automatically powdered by galvanic precipitation from the etchant. The speaker stated that refinements are necessary, however, before the process can be considered practical.

A paper on *Drying of Sensitized Gravure Tissue* was read by Rolland H. Caine of R. R. Donnelley & Sons Co., Chicago.

Paper Moisture Balance

Robert M. Leekley of Time, Incorporated, Springdale, Conn., was Chairman of the Conference's fourth session. A talk on *Paper Moisture Balance* was given by George Hammer, Forbes Lithograph Mfg. Co., Boston. He described the best performing paper as that which lays flat, has a high moisture content and has been processed without loss of moisture content. Ideal operating conditions were said to be 75 deg. F. at 45% relative humidity.

Advocating the use of the paper sword hygroscope, Hammer revealed that in a survey taken of lithographic plants, 75% of those who replied used the instrument regularly. He cautioned that in using the sword hygroscope taking readings at the top of the pile, should be avoided.

During a slide presentation, the speaker showed records to prove that paper changes size at different temperatures even though the relative humidity remains unchanged. He said that many lithographers think testing paper for moisture balance should not be part of their costs. He also remarked that changing the moisture content sometimes affects paper so it will not run properly on the press and causes distortion.

Referring again to the survey, Hammer said the following statistics were learned: Out of 30 plants responding, 19 had air

Lovely Philadelphians to Entertain Craftsmen's Ladies — A number of entertaining features are in store for the ladies attending the Philadelphia Convention of the Intl. Assoc. of Printing House Craftsmen being held at the Bellevue-Stratford Hotel, August 8-11. Cocktail parties, historical tours, luncheons, gifts, fashion shows and a trip to Atlantic City are some of the activities being planned by the Craftsmen's Ladies Committee which is being headed by Mrs. Eugene H. Davis. During one of their recent meetings they posed for this picture. From left to right: Mrs. William Crayder, Reception; Mrs. Robert B. Harrison, Publicity; Mrs. Joseph O'Neill, Gifts and Prizes; Mrs. Samuel J. Mink, Vice Chairman; Mrs. Frank Barras, Reception; Mrs. Harold Lyle, Gifts and Prizes; Eugene H. Davis, Liaison; Mrs. Davis, Chairman; Mrs. David H. Hopkins, Menus; Mrs. Donald Robinson, Transportation; Mrs. Raymond H. Miller, sr., Transportation; Mrs. Harry C. Link, Program; and Mrs. Alfred Rexford, Entertainment.

Not Quite 100% Usable

MEMBERS of the Technical Assoc. of the Graphic Arts were reminded of the stories of the woodsman who called upon every trick of field experience he knew to bring him through the trials of being lost in the dense forest. The incident arose during a discussion by Robert B. Hobbs of the National Bureau of Standards on the development of a paper made entirely from glass fibers without any filler or binder.

Hobbs explained that despite the glass fibers in the paper, they had found practically every use for the paper except one. That for use as toilet paper. The thought of the glass fiber content made further explanation unnecessary.

conditioning with refrigeration units; four plants had provisions for conditioning paper; six plants hang their paper in air to balance it with pressroom conditions; and 20 of the plants reported the paper they receive for close register work is too dry.

Hammer declared the letterpress printer does not worry as much about moisture content in the paper as does the lithographer. He added that the former's press does not have to contend with water which is essential to the offset-lith process. He reminded TAGA executives that when paper fibers swell, the dimensions of paper change.

Development by the National Bureau of Standards of a paper made entirely of glass fibers was then discussed by Robert B. Hobbs of that governmental agency. He displayed samples of the paper with typing on it. Hobbs observed that the paper's performance in a typewriter indicates its possible use as a permanent record paper. The paper has several advantages for such use, as its non-flammability, resistance to microbiological attack, and stability toward atmospheric moisture, oxygen and acids.

Ink Bleeding Effects

The next speaker, Harry H. Hull of R. R. Donnelly Co., Chicago, discussed *Printing Ink Bleeding in Humid Atmospheres.* Hull explained that some pigments used in printing inks have a sufficiently high water solubility that they bleed when exposed to atmospheres of high humidity. Under these conditions, halftones printed with such inks will change color. Should the halftone be used later as a color proof, it may be impossible for the pressman to match it.

A test for estimating the degree of bleed in a printing ink was described by Mr. Hull. It is made by printing a light halftone (5%) on the paper selected for the printed job, exposing this sheet to an atmosphere of 100% r.h. at room temperature for 16 hrs. Bleeding is indicated by a deepening of the color and color change is measured by instrument.

Other speakers on this program and their topics were D. N. Adams, Harris-Seybold Co., *An Experimental Study of Ink Film Thicknesses,* and Dr. John R. Bradford, Case Institute of Technology, Cleveland, *Lithographic Press Ink Distribution Studies by Radiotracer Techniques.*

Measuring Paper Humidity

The fifth and concluding session of the Milwaukee meeting was under the chairmanship of Benjamin L. Sites of Miehle Printing Press & Mfg. Co. The errors in the measurement of paper humidity by means of gold beater's skin hydrometers were described by R. F. Reed of the Lithographic Technical Foundation. He said these errors are caused by the moisture capacity of the sensing element and temperature effects. Tobias suggested permitting paper temperature to reach pressroom temperature before taking paper sword hygroscope readings.

Controlled Laboratory Printing Techniques was the subject of a paper delivered by William C. Walker of the National Printing Ink Research Institute, Lehigh University, Bethlehem, Pa. Some of the instruments he described for this work were the Huck pressure sensitive base for measuring static printing pressure. Speed is measured by obtaining the time of passage of the cylinder over the plate with an electric stopclock.

The method selected for ink film thickness measurement is direct weighing of the ink on the plate. He said that the laboratory work was performed on a No. 4 Vandercook Proof Press. Dr. Walker stated that use of these techniques in a constant temperature and humidity controlled room has produced highly reproducible results.

The application of noncircular gears on sheeters, sheet slow-down mechanisms, sheet transfers and flat bed press drives was explained by Al Hess.

Offset Collotype

The results of a study on offset collotype were reported by Harry H. Lerner, Triton Press, Inc., New York, N. Y. Collotype is a process by which continuous tone images may be printed from screenless plates. By applying the principles of the collotype process to the offset press, Lerner has uncovered a way by which long runs of high quality are now possible on grainless plates and without a water fountain on the press.

The speaker said this offset collotype plate was developed for the U. S. Army for the printing of aerial photos directly from the original aerial negatives without the intermediate steps of screening as in the conventional offset process. Lerner reported they worked toward the development of a plate from which they could obtain a minimum of 10,000 imp. He reported that on one run, 25,000 imp. were obtained from the same plate. In five press runs of over 10,000 imp. each, he said that no plate ever wore out.

American Visitor Describes DRUPA

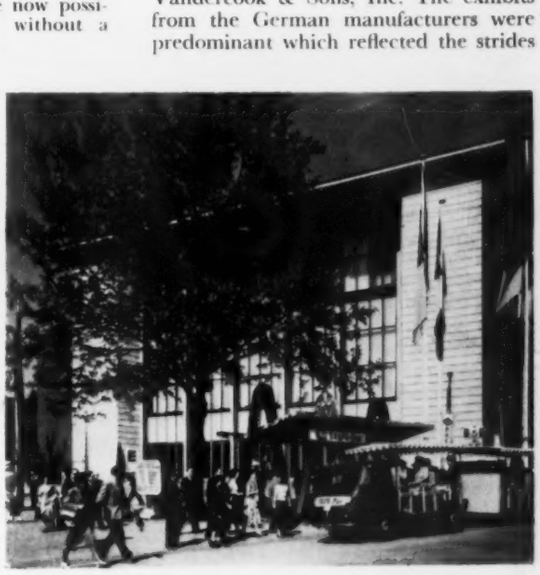
By BENJAMIN SUGARMAN*

**President Consolidated Photo Engravers and Lithographers Equipment Co., Chicago*

THE DRUPA, a gigantic Graphic Arts exhibition was held recently in Duesseldorf, Germany. Made up of a number of buildings housing exhibits, it covered more than 600,000 sq. ft. of area over grounds comprising approx. 50 A.; connected by indoor and outdoor pavilions, bridges and motor bus trains to take the spectators from building to building. The exhibits opened on May 15 and lasted through May 30. There were exhibits of equipment, of new processes, of new techniques in platemaking and printing in every phase, for every branch of the Graphic Arts. Paper mills were represented and a complete miniature pulp and paper mill was in operation.

U. S. Exhibitors

Equipment from every country on the European Continent was shown. The United States exhibitors were Miehle Printing Press & Mfg. Co., Miller Printing Machinery Co., Mergenthaler Linotype Co., Intertype Corporation, Consolidated Photo Engravers & Lithographers Equipment Co., Ralph C. Coxhead Corp., Russell Ernest Baum and Vandercook & Sons, Inc. The exhibits from the German manufacturers were predominant which reflected the strides



One of the exhibit buildings at the DRUPA Graphic Arts exhibition held recently in Duesseldorf, Germany. The motor bus in the foreground was used for transporting visitors from building to building over the 50 A. exhibit area.

made by the German industrialists to recapture the world markets in the printing industry. Total attendance was over 450,000 persons who came from every corner of the world.

German Printers Predominant

Hall E housed an exhibit sponsored by the leading printers of Germany. A three-color gravure press was in operation here producing a 16 page Book of Welcome to Duesseldorf and the DRUPA brochure. This press, an Albertina Gravure Press, was running at 12,000 booklets per hour which included the folding operation. Nearly every type of printer was represented in this exhibit, from bank note engravings and the samples of plates used for printing money and bonds for countries throughout the world, to displays of some of the finest samples of letterpress, gravure and offset color printing.

Another building contained displays of cameras of nearly every size and style. Shown at the Consolidated exhibit were a 24 in. Precision Color Camera, 18 in. x 22 in. Process Darkroom Camera with an operating darkroom and the Automatic Consolidated Rollfilm Camera. Other camera manufacturers present were the Klimsch Company who exhibited its 40 in. Overhead Darkroom Camera, 24 in. Darkroom Camera and several vertical and gallery cameras.

New Techniques Shown

New coating methods of making gravure cylinders were shown as well as a new glass contact screen. Bi-metallic and tri-metallic offset plates and letterpress printing plates were also displayed.

A process for making gravure plate cylinders called Uniprint attracted considerable interest. A hardened plastic photographic plate which is impregnated in hard rubber is used to produce an intaglio cylinder for the box, label and printing trade.

Represented in Hall N were such firms as Koenig & Bauer, Jagenberg, Pola, Heidelberg and Mailander from Stuttgart. The Heidelberg firm had a battery of cylinder and platen presses in operation. Several platen presses were mounted on revolving turntables.

In this Hall, the daily DRUPA news was printed. The Mailander exhibit was comprised of its recently introduced offset proofing press with automatic inking and dampening. The Klischograph machines, known in the United States as the Engrav-a-plate halftone making machine, were shown in this building. Two new machines were displayed, one a line engraving machine and the other a four-color process color separating and engraving machine. Intertype put on an exhibit of its hot metal line composing and photo-typesetting machines. Linotype machines made in Germany and Italy were also exhibited.

Press Exhibits

In Building M, Alberts Frankenthal Co. had 27 presses in operation. Included were one three-color web fed gravure press, two sheet fed gravure presses and approx. 20 letterpresses in sizes from 15 in. by 22 in. to 32 in. by 44 in. On the opposite side of this hall were the Roland offset presses of Faber and Schliecher of Offenbach, which are distributed in this country by Miehle Printing Press & Mfg. Co. Miehle had in operation a battery of Miehle Vertical and Miehle 29 presses.

At the exhibit of the Color Metal Co. of Switzerland were shown the Consolidated offset presses running at speeds of 8000 sheets per hr. A feature of this press is a Nylon brush ductor roller for the dampening system. The 16 in. by 20 in. and 18 1/2 in. by 24 1/2 in. press sizes are built with a pile delivery of over 50 in.

Plastic Material Can Be Welded

In another building, numerous products were on display made from a polyvinyl material called Trovidur. This material is said to be resistant to all acids used in the Graphic Arts and is rigid in structure. The material can be welded like metal with a welding rod of similar material using heated air as the source of heat to bond the plastic together. Trovidur can also be bonded to steel, cement, wood or practically any other material.

BOOKS

Ottmar Mergenthaler and the Printing Revolution

MANY printing executives have a more or less superficial knowledge of the history of printing technology. This is not to be wondered at for the reason that usually they are engrossed in mastering techniques of present day plant operation. In other words, while they appreciate the importance of the printing industry, they have little inclination to pursue its historical progress in ponderous reference sources.

Thus we are inclined to comment upon publication of the book, *Ottmar Mergenthaler and the Printing Revolution*. The book was written by Willi Mengel with an introduction by Lin Yutang and has been published by Mergenthaler Linotype Co., in commemoration of the one hundredth anniversary of the birth of Ottmar Mergenthaler in Hachtel, Germany, May 11, 1854. The story is told simply and fascinatingly. The subject covered is tremendous. We feel that Mengel has told briefly but comprehensively the long span of printing's progress in easily read form. The book consists of only 63 pages, 6 3/8 in. by 9 5/8 in. Many of the pages are illustrated with line drawings. The book is divided into three sections. The first of these is entitled *The Printing Industry Undergoes a Revolution*. The "revolution" occurred over the span of several centuries. In fact, 350 years had elapsed since the discovery of the art of book printing without any essential departure from the methods devised by Gutenberg. In this section we read that the papermaker, parchmentmaker and bookbinder already formed independent crafts in Gutenberg's time.

"Later," it is stated in the book, "there came the hand illustrator, the woodcarver, and the copper engraver. Going back to the Thirteenth Century, the Crusaders, in the course of their efforts to wrest the Holy Sepulcher from the infidel, brought the knowledge of papermaking to Europe. In 1390, Ulman Stromeier founded the first German papermill in Nürnberg. When Gutenberg started printing, there were 10 papermills in Germany to supply his needs."

Toward the end of the Eighteenth Century, iron began to displace the time honored wooden printing press and equipment, other than the metal type invented by Gutenberg. The iron hand press appeared in 1800. An account is given by Willi Mengel of the struggles of Friedrich Koenig which finally culminated in development of a double steam press upon two of which the English *The Times* (London) was printed during the night of November 19, 1814. The German, Friedrick Koenig, and his partner, Friedrich Andreas Bauer, worked constantly after their return to Germany to develop a rotary press. It remained for an American, William Bullock, to build a serviceable rotary machine in 1860. Author Mengel then writes that in 1866 the Walter Press was introduced into *The London Times* Workshop. Incorporated were all the essentials of the modern rotary press:

Two typical pages shown in miniature of the book Ottmar Mergenthaler and the Printing Revolution, *published by Mergenthaler Linotype Co. in commemoration of the one hundredth anniversary of the birth of the Linotype's inventor. The book was manufactured in the Gutenberg City of Mainz by Mainzer Verlagsanstalt und Druckerei Will und Rothe KG, Mainz am Rhein. Within its 63 pages is packed the tremendous and fascinating story of the printing revolution, including press and paper development and the biographical sketch of Mergenthaler himself together with some descriptions of early attempts at development of equipment to set and/or cast type automatically. Author is Willi Mengel with an introduction by Lin Yutang.*

Reels of paper, first and second printing by the same machine, cutting and automatic disposal of sheets. This press became the model for all later types of rotary presses. Its cylinders rotated at a speed of 12,000 times an hour.

The lead stereotype first became a practicable process in 1829. About the middle of the Nineteenth century the first curved stereotype plates were cast and fitted on the cylinders of a rotary press. Thus, as Mengel explains, precious type was conserved. The first wood pulp paper in salable quantities was produced in 1845. During the first half of the Nineteenth Century, inventions important to technological progress in the printing industry were developed.

The invention of the electrotype, first employed by the Potsdam physicist, Moritz Hermann Jacobi in 1837 exercised amazing influence on the industry. Concurrently, typefounding received attention. In 1852 the complete casting machine came at the right time to satisfy increased need for handset type. The invention of lithography by Alois Senefelder started a new branch of printing. In 1818 occurred the building of Senefelder's first press. Other more or less valuable processes were also developed. Bookbinding also was developed from a craft to an industry in the Nineteenth Century. During the period of expanding press development, newspapers also multiplied tremendously, they being the first to employ the new presses.

Section II is entitled *The Effort to Speed Up Typesetting*. During the latter part of the Eighteenth Century efforts were made to speed up the work of the hand compositor to keep pace with press and process developments. This progress from our present-day viewpoint seems painfully slow. The setting of lead type by hand was an exceedingly tenacious method which was a long time in being displaced. As Author Mengel has it: "The revolution in typesetting started with a very simple thought: That of casting type characters in syllable form or even with ligatures and logotypes. These systems, however, were not practical because the type case for logotypes reached impossible proportions for the compositor. Among the next developments, which comprehended the use of faster methods for setting individual types, were devices for setting type with both hands—notably the Lagermann apparatus called the 'Typotheter.' This was fastened underneath the front edge of the type case. While using both hands, the compositor dropped individual types into a funnel." An absorbing review of the many individual typesetting mechanisms including the Paige compositor is presented by the author.

In the third section entitled *Ottmar Mergenthaler Invents the Linotype* is presented a brief biography of the life of Mergenthaler. This is one of the most interesting parts of the entire book. At the age of 18, Mergenthaler emigrated to Baltimore and took the train for Washington, D. C. where he went to work for his cousin, August Hahl. In brief form, Willi Mengel tells about Mergenthaler's progress and the work which resulted eventually in the invention of the Linotype, the basic principles of which survive today.

Silk Screen Workshop Successful

THE fifth Workshop to be held under the auspices of the International Association of Printing House Craftsmen and instituted under President Howard King's administration took place in Cleveland, Saturday, June 19 in the plant of Silk Screen Process, Inc., 2124 St. Clair Ave. This Silk Screen Workshop drew an attendance of approximately 70 people. The Workshop was conducted jointly by the International Association of Printing House Craftsmen and Silk Screen Process Association International.

George Wise, International Craftsman Membership Commission Chairman, supervised the meeting. President Milton Grant, in whose plant the Workshop took place is Vice President of the Silk Screen Association. Bert Zahn, Manager, Graphic Arts Div. of The Glidden Company, Cleveland, and Chairman of the Education Commission of the Silk Screen Association, assisted.

During the day's session, those attending saw a complete demonstration of how a job is handled from the time copy comes into the plant until the finished printed pieces are delivered at the end of a conveyor drier. The printing press part of the plant was also in production operation so that visitors could have a lengthy look-see at the actual printing operation. Of particular interest to visitors were the demonstrations related to photomechanical platemaking operations. For this purpose, the class was divided into four groups.

In response to a query during the question and answer period, a great majority of those present expressed themselves as favoring a second Worskhop in the Fall.

A hearty vote of thanks was extended to Milton Grant for his generosity in opening his plant for educational purposes to an intensely interested group of people associated with the Graphic Arts Industry.

During the discussion period, it was stated that the silk screen process is now almost universally recognized as being the fourth major printing process. Silk screen process is complementary to all of the other three major printing processes. It is estimated that the national annual business volume is approx. $125 million. This figure includes the work done by private plants. Silk screen printers in general (in harmony with the printing industry) use ink not "paint" with which to print. Since the ink film deposited by silk screen method is from four to five times thicker than that deposited by the letterpress process, development engineers have been working on rapid ink drying equipments. In other words, ink drying equipment is being developed which will keep pace with press production. The industry is rapidly becoming mechanized for general work.

Principals in the Silk Screen Workshop held in Cleveland are shown at the educational meeting. From left to right are Milton Grant, Vice Pres., Screen Process Printing Assoc., Intl., and President, Silk Screen Process, Inc., Cleveland; Chairman of the Workshop, George Wise, Board of Governors, Intl. Assoc. of Printing House Craftsmen, and Partner-Superintendent, Dugan-Millis, Inc., Cleveland; and Bert Zahn, Vocational Chairman, Screen Process Printing Assoc., Intl., and General Mgr., Graphic Arts Div., The Glidden Co.

Part of the group attending the recent International Silk Screen Workshop in the plant of Silk Screen Process, Inc., Cleveland, watch intently as one of the company's demonstrators operates a silk screen press. He is producing the certificates which were awarded those in attendance.

Real Progress On the No-Pack Stereotype Mat

By ROYAL H. RAGER*

**Stereotype Supt., South Bend (Ind.) Tribune.*
Abstract of address delivered before ANPA Mechanical Conference, Atlantic City, N. J., June 1954.

IT IS NOT necessary for me to tell you of the general interest created in the newspaper field, among stereotypers, printers, pressmen, engravers and last, but not least, the newspaper publishers, by the development of the No-pack mat by the ANPA Research Department.

To use the No-pack mat some mechanical changes must be made. The mat roller must be free. Sta-Hi machines must be vented to the outside for proper escape of fumes created while the mat is drying. The Sta-Hi vacuum screen must be replaced with one having holes no larger than .030" in diameter. Otherwise, the backing material will be drawn into the vacuum plate or screen, causing a stippled or pimpled surface on the back of the mat and, after casting, a plate with pronounced printing variations. Also, on most older Sta-Hi machines, a capacitor or new timer must be added to give a longer timing cycle. Experiments are now being made on a new type filter to prevent particles of backing and resin from drawing into the vacuum pump.

On the Pony Autoplate, the bolster support ring must be scraped flush with the back of the box and a new head ring must be installed, or the old ring milled, to allow for the mat plus backing material. Side bars must also be changed or adjusted for the same reason.

On some plate casting equipment it may be necessary to cut deeper grooves in the core so that a good shave will be made on the plate ribs.

Metal temperature must be reduced to approximately 590 deg. to prevent frosty plates as the backing material acts as an insulation and retards plate cooling for about 5 sec.

15/16 in. Shrinkage

Mats used at the South Bend *Tribune* are conditioned for 1 1/16 in. normal shrinkage, and when used with No-pack gives us our required 15/16 in. shrinkage. No-pack is a laminated sheet of material, consisting of nine or more plies of resin impregnated tissue and a top separation or tissue slip sheet. It may be used with your regular make mat, provided the mat is conditioned to give from 1/16 in. to 1/8 in. more shrinkage. No-pack is placed on the mat, tissue side up, before the mat is molded and becomes a part of the mat during molding. While the material will follow the mat into the depths of the form when molded, its properties are such that the No-pack will expand in the open or backed areas, and the mat as seen from the backed side is practically smooth.

Different Molding Technique

A different technique of mat molding must be practiced, and new combinations tried in an endeavor to secure a mat that is deep enough for good, sharp halftone and type reproduction; deep enough to print clean, but not molded deep enough to pick up slug ends which so far are causing some trouble. To date we have been using two combinations; one composed of a 0.090 in. cloth back creeper and a 0.090 in. red fibre board. The other is two Tingue, Brown foundation blankets at 0.062 in.; one red fibre board 0.060 in. and one Imperial creeper 0.060 in. Both are fair, but neither can be called the ideal.

After mats are molded, they are trimmed in the usual manner—some hand packing on open ads and slug ends, especially on the top and bottom of open pages—and are placed immediately in the Sta-Hi.

Sta-Hi Temperatures

Sta-Hi temperatures for No-pack operation are just the reverse of that used for hand packed mats. We have our vacuum chamber 100 deg. hotter than the base which runs at 290 deg.; therefore the chamber temperature is 390 deg. Mats are placed on the vacuum chamber under 5 in. of vacuum where rules and borders, especially between open ads, are helped with finger tips and edges of the mat are sealed against vacuum screen by light pressure. The Sta-Hi is then closed and vacuum reduced to 3 in. for a pre-shrink cycle of 1 min., then back up to 5 in. for a complete drying and curing cycle of 3 min. 55 sec.

If the Sta-Hi is properly adjusted, the first cast is generally good and multiple casts may be made, the number depending upon the type of mat used. Mats may be heated and flattened for flat casting with results normally as good as hand packed mats.

All stereotype flat casts, electrotypes and plastics are routed to a depth of 0.065 in. with all open areas removed from plastics. Halftone cuts are based 0.003 in. over type high. All other material in the form must be as near type high as good equipment, properly used, can make it. Any cuts or type that are low in the form are backed at the molding or printing failures will be the result.

Forms Must Be Proper Height

Forms must be of proper height, having no high corners and no warping. They must be kept clean on both top and bottom. This applies not only to those using No-pack, but is just plain good housekeeping.

In using No-pack, one man can do all the necessary backing and place all the mats in the Sta-Hi that are molded from one roller, provided a new form is molded at each time. However, some of the labor replaced by the use of No-pack must be utilized in providing better material for the type form.

In conclusion, I must say that the work we have done with No-pack is purely experimental. This is a new product, over which we have little control. Atmospheric conditions affect both the mat and material to a degree that failures may occur during a humid period. However, when conditions and material are right, a very good-looking paper will compensate for a lot of headaches. We have been using No-pack on nearly all of our pages, with the exception of the Sunday edition, since the 24th of February.

Mat Moisture Migration

During the stereotype session at the Atlantic City (N. J.) ANPA Mechanical Conference, Laboratory Director, Roy W. Prince, discussed tests which he had made regarding the migration of mat moisture during storage periods. He said that the question had been discussed at a number of Mechanical Conferences without arrival at satisfactory conclusions. The bone of contention was whether the storing of mats on end or flatwise causes the moisture in the mats to migrate during the storage period. He reported that after a number of tests at the Easton Laboratory during three months storage periods the unopened packages of mats were stood on end with the mats in vertical position showed very little difference in moisture content of the mat in the top and bottom areas. Prince reported that the moisture content at the top was 25.2 and at the bottom it was 25.6. During the storage period, Prince explained, there is a slight opportunity for moisture

Research Institute Has Been Organized

ORGANIZATION of the American Newspaper Publishers Association Research Institute, Inc. has been completed. The Institute is an outgrowth of the Mechanical Research Department of the American Newspaper Publishers Association which was begun in September 1947.

Richard W. Slocum, Philadelphia *Bulletin*, was named Chairman of the Board of the new corporation; Franklin D. Schurz, South Bend (Ind.) *Tribune*, President; Chas. F. McCahill, Cleveland *News*, Vice President; D. Tennant Bryan, Richmond (Va.) *News Leader* and *Times-Dispatch*, Treasurer, and J. L. Stackhouse, Easton (Pa.) *Express*, Secretary.

Cranston Williams, ANPA General Mgr., was elected General Mgr. of the Institute and C. M. Flint, Mechanical Research Director.

Members of the Board of Directors are:

Richard W. Slocum, Philadelphia *Bulletin*.

William Dwight, Holyoke (Mass.) *Telegram Transcript*.

Walter J. Blackburn, London (Ont.) *Free Press*.

Wm. L. Fanning, Westchester County Newspapers, Yonkers, N. Y.

J. O. Adler, New York *Times*.

E. M. Antrim, Chicago *Tribune*.

George C. Biggers, Atlanta *Journal* and *Constitution*.

James C. Copley, San Diego *Union* and *Tribune*.

D. Tennant Bryan, Richmond (Va.) *News Leader* and *Times-Dispatch*.

K. A. Engel, Little Rock *Democrat*.

H. H. Cahill, Seattle *Times*.

J. S. Gray, Monroe (Mich.) *News*.

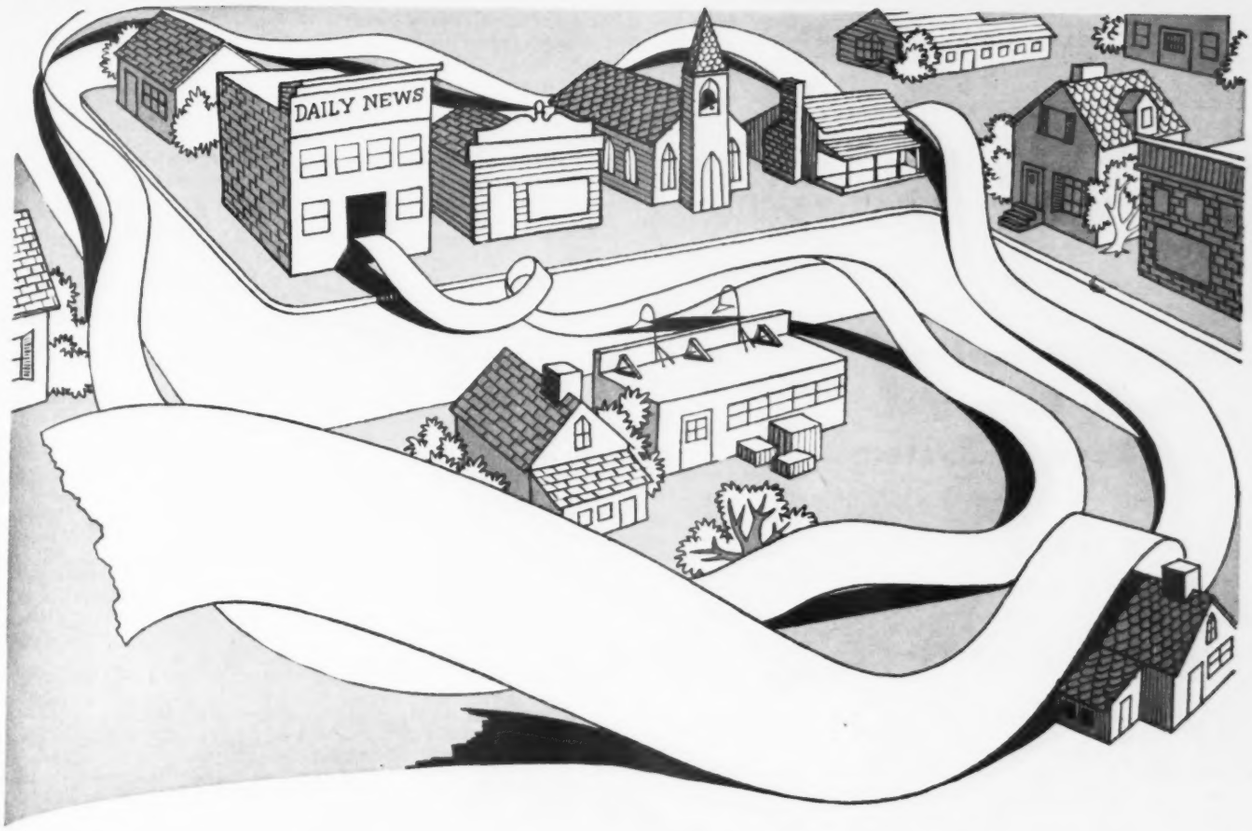
Chas. F. McCahill, Cleveland *News*.

Franklin D. Schurz, South Bend (Ind.) *Tribune*.

J. L. Stackhouse, Easton (Pa.) *Express*.

George F. Coffin, jr., Coffin & Grifo, Easton Pa.

While the first work of the ANPA Research Institute will deal with development and improvement of printing and with new mechanical processes in the newspaper publishing business, the purposes of the corporation set forth in application for its charter provide that the Institute may also engage in and carry on, without profit, scientific research into various phases of the newspaper publishing business including development and improvement of technological processes for the newspaper business; of present and new machinery and equipment; and in addition to establishing and maintaining research laboratories it can undertake any general research problems relating to the newspaper business.



Corona makes your newsprint go farther

Is there a trend to larger body type for increased legibility? The Houston Chronicle is the latest newspaper to adopt new Corona in the 9-point size.

When you use Linotype's new Corona cuttings in 5½-, 7½- and 8-point sizes—you can trim a full six points off every column *without sacrificing legibility or word count.*

From 5½ to 9 point, the new Corona cuttings can make substantial newsprint savings, for your paper—big city daily or home town weekly. Compare them with the standard cuttings and see what you can save.

New Corona Cuttings—for Manual or Tape Operation

12 pica column—7½△44

Corona's shorter alphabet length helps save newsprint by giving the optical equivalent of a letter a full size larger, with the space economy of a smaller size. With Corona you can set more type in less space and still give your readers the benefit of utmost legibility, big open characters and plenty of contrast.

If you want to stretch your newsprint dollar and give your readers a welcome change at the same time, ask your Linotype Production Engineer about a new Corona format for top readability with maximum newsprint economy. Send today for the new Corona specimen folder.

11½ pica column—7½△52

Corona's shorter alphabet length helps save newsprint by giving the optical equivalent of a letter a full size larger, with the space economy of a smaller size. With Corona you can set more type in less space and still give your readers the benefit of utmost legibility, big open characters and plenty of contrast.

If you want to stretch your newsprint dollar and give your readers a welcome change at the same time, ask your Linotype Production Engineer about a new Corona format for top readability with maximum newsprint economy. Send today for the new Corona specimen folder.

• LINOTYPE •

Mergenthaler Linotype Company
29 Ryerson Street, Brooklyn 5, N. Y.

Set in Linotype Corona and Spartan families

Agencies: New York, Boston, Chicago, Dallas, Atlanta, Cleveland, San Francisco, Los Angeles. **In Canada:** Canadian Linotype, Limited, Toronto, Ontario

LEADERSHIP THROUGH RESEARCH

to pass off from the package in the form of vapor. Mat manufacturers do not claim that the wrappers are moisture-proof, he added. In two of the packages, he reported, there was a loss of only .1% during a three month testing period.

Determining Mat Moisture

A method of determining moisture in stereotype mats was discussed by Vernon R. Spitaleri, Research Director, Miami (Fla.) *Herald*. He said the tests were conducted with a moisture indicator which is a battery operated radio frequency type instrument with indicating range from 0 to 30%, and the instrument is accurate within ¼ of 1%. He said that as a result of the tests the common belief that moisture migrates according to the flat or endwise position in which the mats are stored is erroneous. Actually, he asserted, the Miami tests showed that great variation in moisture distribution originates with the mat supplier. He reported that the range of one batch of mats as 25% to 25.8% moisture content and in another package the moisture ranged from 16% to 25.2%. Spitaleri drew no conclusions as the result of the tests and contended that he was just making a report. He advised that if a manufacturer is wondering you can give him a buzz and tell him that you would like to have a constant moisture standard in your mats.

Progress Report— Sta-Hi Color Mat Register System

By O. T. COCHRAN*

**Secretary-Treasurer, Sta-Hi Corporation, Whittier, Calif. Abstracted from address delivered before Atlantic City, N. J., ANPA Mechanical Conference, June 1954.*

ONE year ago, at the Conference in Milwaukee we introduced our new Sta-Hi Master Matcher, color mat comparator and registering machine. We are now manufacturing a Master Matcher and a Master Trimmer for delivery in September to a large Eastern daily newspaper.

The equipment at the Milwaukee (Wis.) *Journal* has been put through every conceivable test under actual operating conditions. Joe McMullen and his progressive mechanical staff, in every department concerned, have been most helpful, and have come up with several suggestions for improvements and refinements in the equipment to further improve its efficiency. We are replacing the test machine now at the *Journal* with one of our latest model Master Matchers incorporating their suggestions as well as improvements developed by our own engineering staff through other extensive field tests in plants running color. The *Journal* believes, as we do, that this perfected Masters Matcher will make possible a faster, more accurate procedure for register of newspaper color, both ROP and color press production.

The original mirrors used in the machine, while sufficiently accurate for the average run of newspaper color registration, did leave something to be desired. In recent months, through the assistance of glass makers and grinding laboratories, we have been able to improve the accuracy of these mirrors to the point where errors in the images are, for practical newspaper printing purposes, almost nil.

We now have a registering device built into the machine, making it possible to quickly and accurately apply these register marks. These marks may be so located on the head and foot bolsters of the mat that they are reproduced on the plates and may be used as a final check for mat and plate shrinkage, or for use with a plate pre-registering machine.

We also have added an accurate built in system for applying drawn center lines on the mats, where this is found necessary or desirable.

We have greatly improved the valving arrangement in the machine, and have made provisions so that the operator may control the application of vacuum through easily applied pressure of either leg, leaving both his hands free for placing and aligning the mats on the lower vacuum platen, or lineup table. The application of vacuum to the upper platen is similarly controlled by a movement of the left forearm of the operator, leaving both hands free for placement of the mat.

By re-locating the push buttons controlling the power for the vacuum system and the push buttons controlling the lighting system, we have eliminated the possibility of the operator accidentally cutting off the vacuum during a critical register operation.

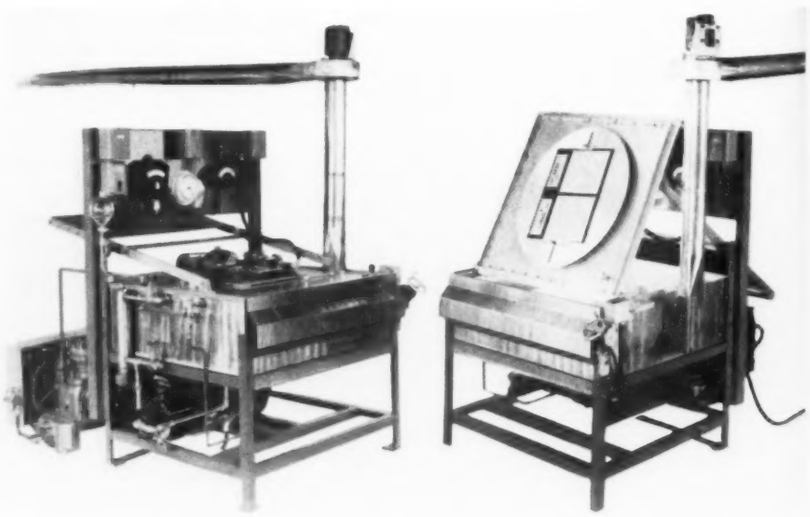
We have also developed, as optional equipment which can be furnished for the machine, a special heated work table and heating oven which attaches to the right side of the machine. This electrically heated fixture makes it possible to keep all mats in process of registration at proper temperature, eliminating possible curling and distortion of the mats and providing a handy working surface for laying out mats.

We have found in our tests that some pressure sensitive dry mats provide a better contrast between the molded printing images. It will interest you to know that, here again through the research program at the Milwaukee (Wis.) *Journal*, a wax based ink has been found that provides ideal contrast in the mats. This ink is quickly and easily applied to the form from which the mats are being molded. Colored inks are used and the contrasting colors are transferred to the several mats.

We would like to point out that the Sta-Hi color registering system actually embraces the use of two pieces of precision machinery, the Master Matcher and the Master Trimmer. The Master Trimmer enables you to bring all the mats in a color set into close alignment to previously applied register marks and to trim each mat in the set exactly alike, at the head, foot, and ring gauge edges.

Time Uses Lithure Plate

The Lithure offset printing plate, developed by Time Inc.'s Springdale (Conn.) research laboratory, was used recently to produce a four page insert of six and eight color reproductions of maps which appeared in the May 17 issue of *Time* magazine. According to Bert Chapman, Time Production Mgr., the fine details appearing on the maps were held through the use of a 200 line screen. The Lithure plate, which is treated with an intaglio copper image surfaced with chromium, is said to have held up under as many as 14 million impressions. Screens as fine as 300 lines to the inch are possible for halftone reproduction. Time reports the plate in use in 115 offset printing plants.



Master Etching Machine—Above are shown two views of the Master Etcher developed by Master Etching Machine Co. for the Dow-ANPA High-Speed Magnesium Etching Process. Plate size is 24 in. by 26 in. Critical temperature of the etching bath in the machine is controlled by refrigeration and heating units. A variable speed motor, fume vent motor, acid pump motor, random motion drive motor, and air and water cooled refrigeration unit are incorporated into the machine. Approximate floor area is as follows: front width, 5 ft.; depth, 6½ ft.; height to top of control panel, 6 ft. Please request PEE No. 209 if you desire additional information.

KEEPS FIRE DAMAGE COSTS DOWN!

Among the many types of up-to-date, fully approved fire protection equipment manufactured by C-O-TWO, the following comprise the principal items on the market today:

- carbon dioxide type hand and wheeled portable fire extinguishers
- dry chemical type hand and wheeled portable fire extinguishers
- carbon dioxide type hose rack and hose reel fire extinguishing units
- built-in high pressure carbon dioxide type fire extinguishing systems
- built-in low pressure carbon dioxide type fire extinguishing systems
- built-in smoke fire detecting systems
- built-in heat fire detecting systems
- high pressure carbon dioxide cylinder recharging equipment

Today's high costs and delayed replacements make it more and more a "must" for you to obtain the lowest insurance rate and the maximum in fire protection at a justified all over expenditure.

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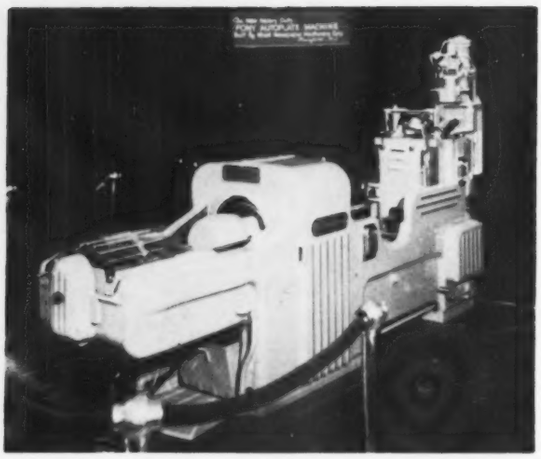


Resplendent in coat of pleasing color enamel, the new Heavy Duty Pony Autoplate Machine was exhibited at ANPA Atlantic City (N.J.) Mechanical Conference, Haddon Hall Hotel during conference days. In the new model are incorporated many new features designed to eliminate operator's muscular effort, make a better stereotype plate with 50% increase in production capacity.

New Heavy Duty Pony Autoplate— Faster, Better Quality Production

Abstract of address delivered by I. Tornberg, Vice President and Sales Manager, Wood Newspaper Machinery Corp. before ANPA Mechanical Conference, Atlantic City, N. J., June 1954.

THE new Heavy-Duty Pony Autoplate looks better outwardly; it is built along much sturdier lines; it replaces laborious manual operations with push buttons; it produces stereotype plates at the rate of three plates every 2 min. instead of 1 plate per min., or a 50% higher rate of production, and it produces plates of a finer quality.

The Electro-Pneumatic Pump is mounted directly on the machine and cannot be affected by variations due to changes in the temperatures of the furnace. It is fully automatic in its operation. Metal is poured by merely pushing a button, the amount of metal being predetermined by adjustment of a hand wheel. Metal is poured at a speed much faster than is possible by the human hand. An automatic timing device in the form of a signal light will tell the operator when the cast has solidified and is ready for removal from the casting box.

Safety features have been incorporated in this machine so that a plate cannot be poured unless (1) The vacuum is on, (2) A mat is in place, (3) Water circulation is turned on, (4) The core is locked in position, and (5) The previous plate has been removed from the casting box. A push button is provided for stopping the pour at any moment in case of emergency, and provision is made for hand pouring should the occasion arise.

We have made an improvement in the nozzle wiper under the mouthpiece of the pump. It is made to swing instead of slide under the mouthpiece. It is easily removable for cleaning purposes and it protects the operator from burns which might be caused by drips of metal when he inserts a mat in place.

The temperatures of the water in the casting box is controlled automatically by a built in temperature control. Adjustment is provided to maintain the temperature of the casting box from 50 deg. to 150 deg. F.

The water cooled core is fitted with the same type of automatic temperature control. We have provided an enclosure over the lockup mechanism of the core casting bars. Should there be a spill or splash of metal, this enclosure will prevent the molten metal from clogging the mechanism.

The motive power for this machine is a 5 h.p. ball bearing motor and the drive consists of five V belts.

The shaving arch is an integral casting with the frame. There is absolutely no possibility for misalignment between the shaving knife and the curvature of the arch, thereby guaranteeing a plate of true curvature under all conditions. A water-cooled liner is fastened to the inner curve of the arch and provision is made for maintaining proper temperature within it while plates are being shaved.

A particularly important improvement in the shaving section of this machine is incorporated in the method of holding the plate in the arch and maintaining it therein while the tail is cut off and while it is being shaved. After the plate has been cast, it is first pushed into the region under the arch, and then brought back to engage a hinged plate-stop which is mounted on the knife bar and rotates with it. This design makes an important contribution to the maintenance of uniformity in the width of the plate. As you know, when a still hot plate is pushed against any stop, however gently, it is not unlikely that a flat is produced on the bevel of the plate which may vary with the strength of the individual operator. The cammed surface on the face of the plate-stop effects engagement of the bevel of the plate which has not been flattened by the impact and readjusts its position before the plate is locked in place. This eliminates a variable which is particularly detrimental when color plates are being produced and is important, particularly where narrow margins are being maintained. The lifting of the plate into the arch is initiated by push-button operation. When the button is pushed, the plate is first, squeezed slightly together; second, lifted into the arch; third, the squeeze is released; and fourth, the plate is locked into the arch by a spring-actuating locking device which is constantly following up the initial clamping during the shaving operation.

The shaving is accomplished by double shaving knives, both mounted on the same knife bar, the first being the roughing knife and the second the finishing knife. The saw spindle is mounted on ball bearings and all pockets and obtrusions have been eliminated so there will be no accumulations of chips.

Up to now it was necessary for the operator to open a cover to admit the plate to the cooling stand; close it; push a flush valve button; wait a few seconds while the water played on the plate; and then open the cover again to remove the plate. All of this is now changed by a brand new idea, which first of all, permits the plate to be observed by the operator during the cooling action, and second produces a fully automatic cooling and drying cycle. Specifically, when a plate is introduced on the cooling stand, the operator brings the handle on the end-guards over the plate. The aluminum end-guards are latched in place over the plate and automatically the following actions occur: Water is turned on for a predetermined length of time; when the water stops playing on the inside of the plate, compressed air is automatically turned on to blow off all excess water; and, without further attention on the part of the operator, the end-covers are automatically returned to their former place and the plate is ready to go to the pressroom.

One other feature which should be mentioned is the chip pan under the cooling stand. It is no longer necessary to remove metal chips from the machine by the use of a shovel. A chip pan large enough to hold chips from about 100 plates may be removed from the end of the machine and emptied into the metal pot with the least amount of effort.

Composing Layout For Best Handling News and Ad Copy

By AMOS G. HOFFMAN*

**Special Representative, Intertype Corporation.*

Abstract of address delivered before ANPA Mechanical Conference, Atlantic City, N. J., June 1954.

A STREAMLINED composing room, becomes increasingly important as newspaper production costs continue to mount. To set up a production line, the placement of equipment must coincide with the flow of work, with the shortest practical distance between steps. The degree of efficiency attained is in direct proportion to the achievement of this goal. The flow of work we are concerned with is the flow of copy.

Synchronizing Equipment

To take care of this news copy we have the first group of equipment—news typesetting machines, one or more headletter machines, a dumping bank, a news proof press, correction bank.

To synchronize the news equipment

(*Continued on Page 59*)

Patents

For The GRAPHIC ARTS

Covering patents issued Apr. 6, 13, 20, and 27.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

BINDING, CUTTING, PERFORATING:

2,676,659. CENTERING GUIDE MECHANISM is for use in the binding of printed material in ring-type binders to form permanently bound volumes, and comprises a table having a slot extending in alignment with a sliding element mounted beneath the table for movement along the table. A collapsible guide is pivotally mounted on sliding element and guided along the slot. Guide is movable into a vertical guiding position and is collapsible into associated slot to permit uninterrupted insertion of sheets into and withdrawal of sheets from the guide by the movement along top of the table. A lock is yieldably engaged with collapsible guide when it is desired to hold it in vertically extended or collapsed position. Invented by Charles Edward Emmer, Chicago, Ill. Assigned to General Binding Corp., Chicago, Ill. Application Dec. 30, 1949. 5 Claims.

FEEDING, FOLDING, DELIVERY:

2,675,232. PRINTING PRESS CONTROL provides a portable attachment for controlling paper feed cycles to permit double, triple or quadruple rolling by feeding paper only every second, third or fourth press cycle by a portable device which can be transferred from press to press as needed. The device consists of a case having a spring loaded plunger rack geared to a valve suitable for holding or breaking suction alternately. The case and its contents are adapted to be positioned between a moving part of press and a convenient press frame with a connection to the suction line. Invented by Aubyn D. Cardenas, New York, N. Y. Unassigned. Application Feb. 11, 1950. 4 Claims.

MISCELLANEOUS:

2,676,165. POLYSULFIDE POLYMERS, useful for manufacture of printing rollers and blankets for newspaper printing, printing plates for use with inks, etc., are prepared by reacting at 25-250 degrees C. an organic polymercapto compound characterized by the unit RS_q where R is a radical having skeleton carbon structure selected from

$$-\overset{|}{C}-\overset{|}{C}- \text{ and } -\overset{|}{C}\ldots\overset{|}{C}-,$$

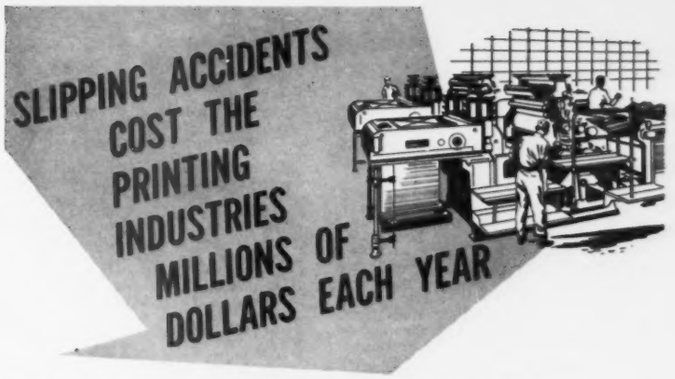
q is 2, 3 or 4 and S is a sulfur atom, with an organic monomeric disulfide having the formula R'SSR', where R' is an organic monovalent radical.

Reaction product oxidized to convert all mercapto groups to disulfide linkages. Invented by Edward M. Fettes, Trenton, N. J. Assigned, by mesne assignments, to Reconstruction Finance Corp., Philadelphia, Pa. Application May 10, 1951. 5 Claims.

2,676,416. APPARATUS FOR SELECTIVE DRYING of the ink printed on a paper web without making the paper brittle is shown. The web is fed into a concentrated electromagnetic field and exposed to the field for a time sufficient to dry the ink without excessive drying of the paper web. Invented by Carlo L. Calosi, Cambridge, Mass., and Hermann Gunther Rudenberg, Newton, Mass. Assigned to Raytheon Mfg. Co., Newton, Mass. Application Mar. 16, 1951. 2 Claims.

PLATEMAKING:

2,675,315. PHOTOSENSITIVE COATING CONTAINING A HYDROPHILIC COLLOID AND A POLYVINYL CHLORIDE DISPERSION is useful in the making of relief printing plates, using anodized aluminum as the plate material. The coating comprises a mixture of a bichromated gelatin, and an aqueous dispersion of a resin selected from the class consisting of polyvinylidene chloride latex and polyvinyl chloride-polyvinyl acetate copolymers. The ratio of gelatin to the aqueous dispersion is 1 to 2.5 and 1 to 5. The composition is adapted to produce a light-sensitive coating in which a reversal image may be formed by exposure to light and development in an aqueous solution. Invented by Henry C. Staehle and Lawrence E. Martinson, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application Dec. 13, 1949. 5 Claims.



SLASH COMPENSATION INSURANCE PREMIUMS with

ALGRIP

Slippery floors in pressrooms that keep accident rates up, production down and insurance premiums out of line can be made safe quickly and easily by installing ALGRIP Abrasive Rolled Steel Floor Plate.

In countless plants, laying ALGRIP in slippery areas has stopped accidents and pared insurance premiums down to pocket size.

Hundreds of tiny abrasive particles impregnated *to a controlled depth of penetration*—an exclusive ALGRIP feature—into tough, lightweight steel plate gives every square foot of ALGRIP an abrasive "grinding-wheel" grain surface that takes a firm grip at every footstep. And ALGRIP's surface never becomes smooth because wear only exposes new particles.

ALGRIP foot safety pays for itself in savings of insurance premiums. Write today for full details on how ALGRIP can cut costs for you. There's no obligation.

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Please send Booklet AL-30 on cutting costs with ALGRIP.

Name _____ Title _____

Address _____

City _____ Zone _____ State _____

2,676,100. METHOD AND APPARATUS FOR REPRODUCING IMAGES on print-receiving material from image copy avoids the usual makeready required in ordinary printing and eliminates the drying and other finishing operations required in ordinary multicolor printing. Light rays correlated to the image copy are projected through a lens and upon a light sensitive target to cause the emission of streams of electrons in areas correlated to the image copy and simultaneously the print receiving material is positioned closely adjacent the electron emitting surface of the target but spaced from same by an air gap and the path of the electrons. Reproducing material in cloud-like form is introduced into the air gap to be acted on by the electrons and propelled to the print-receiving material. Invented by William C. Huebner, Mamaroneck, N. Y. Assigned to The Huebner Co., Dayton, O. Application Feb. 2, 1952. 29 Claims.

2,676,886. METHOD OF PRODUCING PRINTING PLATES for planographic, offset printing machines is effected by applying a light-sensitive colloid to the surface of an aluminum printing plate. The colloid contains an inhibiting agent selected from potassium iodide and ammonium thiocyanate for forming with copper a copper compound highly insoluble in both alcohol and water to prevent copper from being deposited on the plate from penetrating colloid. The desired picture is reproduced on the sensitized surface which is then developed to expose image-bearing areas. An adherent pure layer of copper is deposited on these areas by subjecting plate to an acidic alcoholic salt solution of copper. Invented by Robert Barbarite, Brooklyn, N. Y. Assigned to The U. S. Printing and Lithograph Co., Mineola, N. Y. Application Aug. 31, 1950. 3 Claims.

PRINTING PRESSES AND EQUIPMENT:

2,674,185. PRINTING ROLL is useful for imprinting headings and variably spaced down rules and margins on either partly preprinted or blank stationery. The roll includes a unitary cylinder, a continuous peripheral recess in the cylinder extending longitudinally and type carriers mounted in the recess for sliding movement into selected imprinting positions. Line imprinting rings of split radially resilient construction are installed on the cylinder in selected longitudinal positions with the free ends of the rings ending about at the side edges of the recess. Invented by John T. Davidson, Dayton, O. Assigned to The Standard Register Co., Dayton, O. Application Oct. 30, 1950. 14 Claims.

2,674,186. TYPESETTING LOCK CLAMP is for securing printing matter prior to locking the matter in a chase. It is in the form of two L-shaped arms, one being apertured and the other having a tongue so that the two are adjustably slidable within each other. A lock for securing the arms in various adjusted positions is included. A scale on one of the arms readily indicates the opening between the arms, which is an exact indication of the depth of the printing type. Invented by Hugh Kenneth Cameron, Ottawa, Ont., Can. Assigned to D'Arcy Donoghue and Richard J. Donoghue, Ottawa, Ont., Can. Application Mar. 14, 1950. 3 Claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC. Munsey Bldg., Washington, D.C.

2,674,187. GAUGE-PIN FOR PRINTING PRESSES is in the form of a thin narrow strip or band and is adapted for use on a printing press equipped with a gauge-pin mounting-strip at the bottom and/or at the side of the platen. It may be easily moved along the strip from one position of adjustment to another without the use of tools. The gauge-pin includes an abutment-wall against which sheets are to be fed and has a guide-tongue over-reaching such abutment-wall to direct sheets against the same. Invented by Abel Kluge, Woodbury Twp., Washington Co., Minn. Assigned to Brandtjen and Kluge, Inc., St. Paul, Minn. Application Aug. 2, 1951, 4 Claims.

2,674,943. PROOF PRESS includes a novel structure for attaining the best operating condition of the mechanism to grip the paper at one end edge and secure it at the edge to the rotatable cylinder while the cylinder is stationary. This is automatically effected by rotation of a handle by which the cylinder is manually turned in one direction. The grip of the paper is released at any position of the cylinder with reference to the other parts of the machine by a reverse turning movement of the handle. Invented by Freeman Barney, Spring Lake, Mich. Assigned to The Challenge Machinery Co., Grand Haven, Mich. Application July 26, 1948. 3 Claims.

2,675,756. WEB TENSION RETAINING DEVICE FOR ROTARY PRINTING MACHINES of the type including the usual impression roll, an idler roll and a web feeding roll which are slidably mounted on a frame for unitary movement toward and away from a fixed printing roll mounted in the frame uses a web feeding roll which has an endless loop driving element. Respective paths of web and driver each have a predetermined length when impression roll is in operative relation with respect to the printing roll. A separate axially fixed arrangement mounted in frame is respectively interposed in paths of web and driver to maintain respective paths at predetermined lengths throughout range of movement of the mounting slide. Invented by Allan Vegell Elmhurst, Ill. Assigned to Standard Process Corp., Chicago, Ill. Application July 21, 1948. 11 Claims.

2,676,536. DRYING MEANS FOR THE INKING ROLLERS OF LITHOGRAPHIC AND THE LIKE PRINTING PRESSES consists of a shield which may be secured to a press adjacent one of the inking rollers, two parallel hollow elongated closed tubes secured to the shield and extending on one side of same in cooperating relationship with peripheral surface of inking roller. The tubes are perforated along entire length at their faces nearest to the roller. A source of compressed air is connected to one tube and a source of vacuum to the other. A valve for selectively closing perforations in the first tube comprises a plurality of independent leaf springs secured within the tube, each extending over a few perforations. Thumb screws contact the leaf springs to press them against the perforations. Invented by George J. Ste-Marie, Montreal, Que., Can. Unassigned. Application May 4, 1953. 1 Claim.

2,676,537. INTAGLIO PRINTING MACHINE, such as a copper plate printing press, includes a non-compressible cylindrical pressure roller which is capable of rotating in contract with a rotary metallic cylindrical printing form. A counter-pressure roller is capable of rotating in contact with the pressure roller, and has an elastic surface layer adapted to yield to pressure exerted by pressure roller without displacement of the bearings which support the elements of the machine. Invented by Georges Kantz, Caracas, Venezuela. Unassigned. Application Oct. 20, 1950. 10 Claims.

2,676,538. CLOSED CYLINDER HOUSING FOR INTAGLIO PRINTING PRESSES comprises end closures which carry arcuate top closures which overlap ends of the cylinder. The housing is for use with presses which use a shaft carrying an intaglio printing cylinder journalled in a pair of end frames which carry the closed housing. A bottom platform for the housing extends between the end closures and transversely beyond sides of the cylinder. Flexible side closures extend between the end frames and slide vertically between the guides which are carried by the end frames and which extend from a position overlying cylinder, forming a partly arcuate path for side closures so that the side closures may slide into and out of sealing relation with top closures and the cylinder on opposite sides of the printing area. Invented by Arthur P. Bamford, East Orange, N. J. Assigned, by mesne assignments, to E. G. Staude Mfg. Co., Inc., Concord, N. H. Application July 5, 1951. 15 Claims.

2,676,539. INKING MECHANISM FOR ROTARY INTAGLIO FOUNTAINS comprises an ink fountain wall having an ink supply duct, a manifold communicating with the duct, an elongated orifice for discharging ink onto a printing cylinder and an elongated channel between manifold and orifice. A cover secured to the wall forms a portion of the walls of the channel. A plurality of removable mutually separated flat obstructions are spaced along the channel to restrict the flow of ink. Invented by Alfred Behringer, Cupsaw Lake, N. J. Assigned to Publication

CHALLENGE PRESENTS
CUTTERAMA
Diamond (Hydraulic Clamp) Power
Diamond (Hand Clamp) Power Cutter
Challenge 370 Automatic (Hydraulic Clamp) Cutter
Challenge 193-265-305 (Hand Clamp) Power Cutter
Challenge 265-305 (Hydraulic Clamp) Power Cutter
Challenge 265-305 Lever Cutter
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Put yourself in the picture — with a rugged Challenge Paper Cutter that's as right for you as profit itself!

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Yes, the Challenge line of dependable paper cutters is truly panoramic in scope. Every style . . . every size . . . designed to save you time, labor and money — and insure more profitable cutting. Write for full details today.

763

THE CHALLENGE MACHINERY CO.

Office, Factories and Show Room: Challenge GRAND HAVEN, MICH.

TRADE-MARK ®

Challenge Owns The Printing Equipment Manufacturing Rights of *Morgans & Wilcox Manufacturing Co.*

Corporation, New York, N. Y. Application May 5, 1950. 12 Claims.

2,676,540. DUCTOR ROLL CONTROLLING MECHANISM is for use on a printing press. The mechanism comprises a shaft rotatable in a housing and a ductor roll bearing mounted eccentrically on the shaft for movement back and forth between two terminal positions. The axis of the shaft lies in a plane of reference intersecting both terminal positions of bearing. A rack is reciprocable in the housing. A gear arrangement connects shaft and rack for rocking shaft to move bearing from one terminal position to the other. A movable finger adjacent the rack engages a recess in the rack for releasably locking the bearing adjacent one of its terminal positions. Invented by Harry W. Faeber, Larchmont, N. Y. Assigned to Time, Incorporated, New York, N. Y. Application Jan. 14, 1950. 6 Claims.

2,676,541. ARRANGEMENT FOR THE PRINTING OF FORMS COVERED WITH ELASTIC FOIL includes a printing form which is mounted on the type bed of the press. Printing characters are mounted on the form which is surrounded by and lockable in a chase. An elastic foil covers both the printing form carrying the printed characters and the chase. A positive pressure arrangement seals the chase against the type bed. A negative pressure arrangement for the air-tight sealing of elastic foil against the chase and the printing form is operatively connected to the type bed and the chase, and includes a suction pipe passing through the chase. Invented by Artur Buttner, Heidelberg, Germany. Assigned to Schnellpressenfabrik Aktiengesellschaft Heidelberg, Heidelberg, Germany. Application Jan. 2, 1952; in Germany, Mar. 2, 1951. 9 Claims.

PRINTING INK:

2,675,320. COATED PIGMENT AND MINERAL OIL INK CONTAINING SAME contains a pigment associated with a strongly basic metal salt of a sulfosuccinate ester having at least one alcohol residue attached to the carboxyl group of the sulfosuccinate acid, the sulfonic acid group being attached to the strongly basic metal. The total number of carbon atoms in the alcohol residue is at least 18, and the amount of sulfosuccinate is at least sufficient for a monomolecular film covering the pigment particles. The printing ink of the invention has improved rheological properties. Invented by George L. M. Christopher, New Canaan, Conn., and Frank Tarantino, North Plainfield, N. J. Assigned to American Cyanamid Co., New York, N. Y. Application June 12, 1951. 20 Claims.

2,675,321. COATED PIGMENT AND MINERAL OIL INK CONTAINING SAME is non-aromatic and contains a pigment which is associated with a sufficient amount of an alkali-forming metal salt of a dialkyl dithio-phosphato monoalkyl succinate, the total number of carbon atoms in the three alkyl groups being at least 18 and the amount of the dithiophosphato-succinate being at least sufficient for a monomolecular film covering the pigment particles. The invention provides inks of excellent dispersion having improved properties such as plastic viscosity, thixotropy, texture and strength. Invented by George L. M. Christopher, New Canaan, Conn., and Frank Tarantino, North Plainfield, N. J. Assigned to American Cyanamid Co., New York, N. Y. Application June 12, 1951. 9 Claims.

Composing Layout

(Continued from Page 56)

group with the flow of work we first must place the head machine or machines as close as possible to the copycutter's desk.

The typesetting machines which set news copy and classified body matter should be located as close to their dumping bank as can be managed, with first consideration given to those producing lead paragraphs, cut captions, and other "freak" composition. The terms "freak" is used loosely here to include any composition that is not set in single column width or less in the type faces and point sizes chosen for news text or classified ad body matter.

Where ring (correction) machines are provided, they must be as close as possible to the correction bank. While the copy cutter himself distributes the copy to the head machines—and sometimes lead paragraphs and cut captions—news operators pick up their own copy. Where condition permit, all travel by these operators to and from the copy desk should be between machines (sidewise) and not past other operators.

The news proof press should be located between the news dump bank and the correction bank. If proofs are delivered to the proofroom by hand, then the proofroom obviously should be situated in close proximity to the correction bank. Where proofs are delivered by a mechanical device, the location of the proofroom is of minor importance.

The dumping bank for the operators who set the display ad copy should be between the machines they operate and the ad assembly section. With this arrangement, copy can be picked up from the opposite side by the men who assemble the ads.

Classified ad copy overlaps news and display ad equipment. Body matter—5, 5½ or 6 pt.—is set on the news machines. Semi-display — single column without border but using larger point sizes—is routed to machines with matrices to produce these lines, usually takes the same route as run-of-the-paper display ad copy.

This brings us to the third group of equipment, used by the men who assemble ads: Ludlows, type in cases, saws, mitering equipment, slug strippers, and adequate frames or work-tops for the assembly of ads; proof presses for ads; provision for ad storage.

The system used for the production of Ludlow type varies with the volume. Where the demand is large enough, an operator is assigned to set the type, deliver it to a dumping bank, where it is picked up by the ad assembly men.

Where the volume does not justify the time of one operator, handmen usually produce Ludlow type before they assemble an ad.

Where operators are provided, the equipment should be located adjacent to the ad operators' dumping bank. Where handmen produce their own Ludlow type, the equipment should be located centrally in the ad assembly area.

Cases containing Monotype or foundry type, whether used exclusively for display

EQUIPMENT AND SUPPLIES
for every phase of
PRODUCTION

EASTERN | *Service* *Quality* *Economy*

When it comes to equipment and supplies for every phase of newspaper production . . . Stereotype . . . Composing . . . Photoengraving . . . Pressroom . . . ORDER FROM EASTERN!

Hundreds of nationally endorsed EASTERN products are listed in the new Catalog No. 12. WRITE FOR YOUR COPY IF YOU DO NOT HAVE ONE.

TRU-MOLD CORK MOLDING BLANKETS—Perfect density and printing qualities in 1/8", 3/16", 1/4", 5/16", 3/8" thicknesses, and in all standard sizes from 20 x 24" to 25 x 42".

DOUBLE COATED CUT MOUNTING TAPE—Scotch or Plate-Tak, for mounting any type cut on wood or metal base. Widths of 1/4", 1/2", 1" and 2".

ROSIN WEB SPLICING PASTE—Specify **Light** for Summer, **Extra Light** for Winter use. In 1, 5, and 10 gallon cans.

EMPIRE COLD TOP ENAMEL—Perfect for all weather, humidity or temperature conditions on either zinc or magnesium. Fast printing and fast developing!

ENS EASTERN FOR ECONOMY

EASTERN
NEWSPAPER SUPPLY, INC.
96-03 NORTHERN BLVD., CORONA 68, NEW YORK

Superior STEREOTYPER'S SUPPLIES!

CHISELS	PLANER BLOCKS	JIG SAWS
CORK MOULDERS	CORK CREEPERS	CIRCULAR SAWS
MOULDING BOARDS	ROUTER BITS	RUBBER CREEPERS

Gummed Backing Felt, Perforated or Plain all Cellophane Wrapped in Handy Sized Containers for Easy Handling

Patented "Bulldog" Cork Moulding Blanket and Creeper for Fine Halftones and Solid Black Printing

30% Quantity Discount on Moulding Materials

WRITE FOR CATALOG NO. 10

AMERICAN PUBLISHERS SUPPLY, INC.

P. O. Box 421 **Lynnfield, Mass.**

composition or in conjunction with Ludlow, should be placed advantageously so that a minimum of travel by compositors is involved.

A saw should be provided for each pair of ad frames. Mitering equipment and slug strippers must also be located as centrally as possible.

And, as in the news group, the ad proof presses must be close to the proofroom unless proofs are conveyed by mechanical means.

The next movement in the flow of ad type and classified display type is from the proof press to storage.

Storage systems for ads on galleys is a separate and complicated subject that challenges the best thinking of composing room personnel. Perhaps it is sufficient to say here that it should be as close as possible to the page makeup section, with ample table-top space on which to place galleys to make corrections.

Importance of Placement

Ideal arrangements can not always be obtained. Handicaps are imposed by the shape of the area assigned to the composing room and by obstacles such as supporting posts and pillars in that area.

Sometimes the location of the larger pieces of equipment is dictated by such obstacles. Then the subsidiary focal points must be adjusted to the best possible advantage under the imposed conditions.

Occasionally these obstacles can be utilized; for example, a magazine storage rack developed around a pillar. Such improvisations sometimes can be very successful.

Endeavor to start planning with an open mind, striving only to expedite the flow of copy, and taking care of the restrictions imposed by architectural obstacles only as they arise.

Streamlined mechanical arrangement perhaps is more readily attained in a smaller newspaper composing room than in a larger plant. It is easier to place one headletter machine close to the copycutter than three.

The development of a highly efficient, smoothly operating composing room should be a cooperative project. The efficiency will be intensified when those working within the system, as well as those supervising it, share the responsibility of planning.

Some of the factors which can help greatly to improve a newspaper production system are as follows:

1. A uniform and simple markup code, when used exclusively on ad copy by the markup men, to specify type faces, speeds ad copy through type production.

2. A listing of the type faces and point sizes specified on each ad will avoid confusion, and consequently save time, as the copy progresses from machine to machine with each operator cancelling his part of the specifications as his type is set.

3. Copy bins or hooks, marked to coincide with the plant identification of each ad machine, are sometimes provided as the source of copy for ad operators; in some offices the ad copy is delivered to the machines. By the first method of copy

Heidelberg Shows Improved Presses — Original Heidelberg exhibited two improved automatic platen presses at the recent 1954 Intl. Printing and Paper Fair held at Dusseldorf, Germany. Inking rollers on both the 10 in. by 15 in. and 12 in. by 18 in. Heidelberg models have been equipped with ball bearings. The company claims the addition has improved the inking of the form and increased the production speeds of the presses. Heidelberg also introduced cylinder presses with sheet sizes up to 21 in. by 28 in. and equipped with four form rollers. The view here shows the firm's exhibit at the Fair which consisted mainly of 30 presses.

distribution the man dispatching ad copy can control the "lifting" of magazines on ad machines, and this, to me, is highly desirable.

4. Maximum interchanging of matrix fonts should be the goal for ad machines. This means that the mold equipment should be identical on as many of these machines as possible.

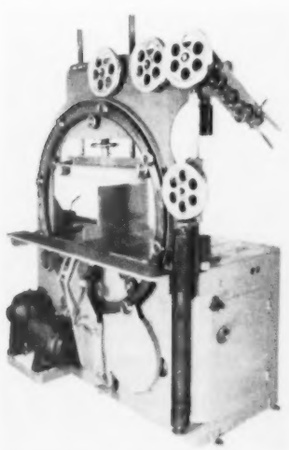
5. Magazines storage or filing, where there are numerous fonts of ad matrices, should be systematic. Permanently assign as many fonts as possible to specific machines, then provide enough space to have an individual slot in a magazine rack for the exclusive storage of such extra magazine when it is not in use. Unsystematic magazine storage in a composing room is as time-wasting and as confusing as the indiscriminate filing of business letters.

Mailing Room Mechanization Makes Progress

INDICATIONS of continued interest by mechanical and production executives in furthering the mechanization of newspaper mailing rooms was reflected in the discussions devoted to this department during the ANPA Mechanical Conference in Atlantic City, N. J., June 1954. The program consisted of talks and movies on recent developments in newspaper bundle tying machines, a stuffing machine and a stacking machine. Chairmen of the meeting were William E. Gibbons, Production Mgr., Portland (Ore.) *Journal*, and Henry J. Conland, Asst. Secretary-Treasurer, Hartford (Conn.) *Courant*.

Wiretyer Bundling Machine

Four models of the Wiretyer Bundling Machine were explained by L. F. Fallon, Director of Sales, Wiretyer Corporation. They are as follows: Single tie per cycle, manual feed machine; the same unit equipped with automatic feed and eject conveyor tables; a single or simultaneous double tie machine for manual feed; and a fully automatic, single or simultaneous double tie unit, with feed and eject conveyors.



The Inland Wire Tying Machine for newspaper mailrooms was described at the mailing session of the ANPA Conference. The machine, it is claimed, will handle bundles ranging from 10 in. by 2 in. up to and including 36 in. by 16 in.

Fallon told of the development of the automatic feed conveyor equipment, a power driven hinged section of the conveyor which is installed ahead of the Wiretyer machine. He announced that several of these are in use at the Dayton (O.) *News* and Miami (Fla.) *Herald*. According to Fallon, features of the machines now include a twisted tie with cut ends buried to protect handlers and conveyor equipment, automatic lubrication system and interchangeable tying mechanisms.

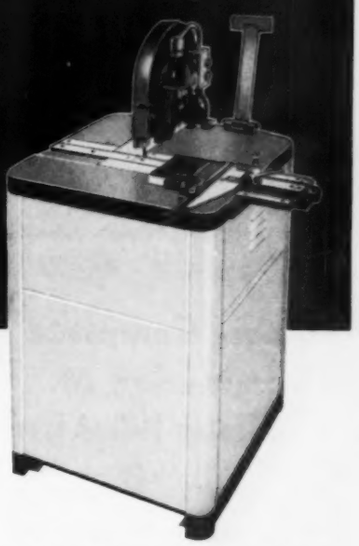
Wallastar Bundling Machine

G. S. Blair, Research Engineer, Toronto (Ont.) *Star*, spoke next on recent developments on the Wallastar Bundle Tying Machine. Blair described the wire feeding mechanism on the Wallastar unit which has been designed to change the shape of the wire from round to oval and leave a flat surface on either side of the wire. He added that as the wire is flattened it is also elongated or stretched about 15%. He claimed a saving in the amount of wire used.

An electrical weld is used on the Wallastar machine to secure the wire ends. The weld timer, mentioned by the speaker, is designed to compensate for changes in air pressure and electric line voltage surges.

Concerning the Starstarter, a machine which automatically starts the bundle and feeds a bottom wrapper under it, he said that the bottom wrapping material can be varied to suit conditions.

NOW!
TWO ROUSE TIME-SAVING
PLATE SAWS
With Exclusive Automatic Feed
For Photoengravers,
Stereotypers, Printers



No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

Cuts are made to Picas, Points, Quarter Points or Inches as required. Outside Mortising is effectively done to pica and point measurement.

NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (on Both Models)

1. Now you can make *cuts as small as 1 Pica square* for signatures, key letter or number changes, etc.
2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.
3. Saw blades are changed in just 1 minute due to new lever-operated tension release. Blades stay sharp during 30-40 hours continuous operation. New blades are inexpensive.
4. New simplified gauge adjusting device makes it easier to maintain perfect squareness in cutting.

DESIGNED BY MEN WITH 25 YEARS KNOW-HOW IN BUILDING BAND SAWS FOR PRINTERS

Write for complete details TODAY!

H. B. ROUSE & COMPANY
2214 North Wayne Avenue, Chicago 14, Illinois

ROUSE PRODUCTS...The Standard of the World Since 1899

In the summer, a very light and inexpensive bottom wrapper may be used. In winter, a heavier butcher paper may be used, while on stormy days an asphalt impregnated waterproof paper can be substituted.

Blair reported on a recently introduced Wallastar machine which receives the bundles, applies the bottom wrapper, aligns, compresses and ties the bundle, and ejects the completed package. In response to a question, he said that an automatic bundle tying machine is practical for any size newspaper where it's important that deadlines are met and the newspapers are out on the streets in a minimum amount of time. Asked whether return papers could be used on the new Wallastar machine for a bottom wrapper, Mr. Blair replied that they could not as it was designed for a roller feed.

Inland Wire Tying Machine

Features of the Inland Automatic Wire Tying Machine were presented by E. A. Johnson, jr., President, and L. A. Kuckie, Sales Mgr., both of Inland Wire Products Co. The machine is designed for bundling newspapers, magazines, knocked-down corrugated or fiber containers and other packages.

The machine is a single tie unit. Specifications are as follows: max. bundle size, 36 in. by 16 in. or 28 in. by 20 in.; min. bundle size, 10 in. by 2 in.; wire gauge range, 14, 15, 16, 17 or 18 ga.; speed, 26 max. ties per min.; floor space, 62 in. by 35 in. by 77 in. high; and weight, 3600 lbs.

Wire tension is mechanically controlled. A built-in jack and casters permit movement of the machine. Automatic pusher feeding may be adapted to the machine. A movie was shown of the machine in operation at the Fresno (Calif.) *Bee*.

Cutler-Hammer Stacker

Another report on the development status of the Cutler-Hammer Newspaper Stacker was given before the Conference by T. B. Jochem, Development Supervisor, Cutler-Hammer, Inc. Jochem stated that his company expects to go into production on the machine before next year's ANPA Mechanical Conference.

The speaker told of some design changes in the machine over the experimental installation at the Milwaukee (Wis.) *Journal*. One was dictated by the variations in paper length due to off-fold conditions and in width resulting from misaligned insertions from balloon formers. A means for counting on the leading edge of the paper was developed to overcome this difficulty.

The table design has also been modified to take care of off fold conditions as well as increased width due to improper alignment of the balloon formers. Jochem noted that the design is such that no change in the stacker will be required for a range of paper widths from 14 in. to 18 in.

Referring to optional features of the stacker table, he said the design has been changed to incorporate delivery sections on both sides of the table with the choice of delivery to be set at the beginning of the run. Previously, the machine provided for stack delivery to one side only.

The above optional design provides for setting, at the beginning of the run, a delivery schedule whereby a number of stacks will be delivered to the right and left alternately. When the preset number has been reached, the drive automatically reverses and delivers the same number of stacks to the opposite side of the table followed by reversal to deliver to the first side.

Dexter Stuffing Machine

The final part of the mailroom program was a movie on the Dexter Stuffing Machine in operation at the Boston *Herald-Traveler*. Commentary was given by Peter DeFlorez, Chief Engineer of the Dexter Folder Co. He was asked what the speed of the machine was by W. Watson Southam, Executive Asst., The Southam Co., Ltd., Montreal, Can. De Florez replied that in the film it was running at 9000 per hr. and that it was designed for 12,000 per hr.

DeFlorez remarked that the machine is able to accommodate a tabloid and added that the *Herald-Traveler* uses a tabloid for its outside section.

The speaker said the machine can be built with one head to take a jacket and one section, and is also designed to accommodate additional heads.

During the discussion period, Robert Smith, Mailroom Foreman, Indianapolis (Ind.) *Star* and *News*, wanted to know how big the jacket and opener was on the Sheridan stuffing machine. He was told that the Milwaukee *Journal's* jacket has gone as high as 56 pages.

W. W. Power, Signode Steel Strapping Co., reported that his company has under development a pusher for its bundle tying machine. He said they expect completion of the machine late this summer.

Almost Complete Elimination of News Ink Misting

SUFFICIENT information regarding the formulation of anti-misting ink has been accumulated that it seems "only a matter of time before news inks with reasonably good anti-misting properties become available," Dr. Ira Williams, Director of Research for J. M. Huber Corp., printing ink manufacturer, told the ANPA Mechanical Conference on Tuesday, June 8.

"Almost completely non-misting inks which will have improved lay and less showthrough are not an impossibility," Dr. Williams also stated in his address in which he outlined studies of problems arising from increased speeds in rotary printing.

Dr. Williams described how manufacturers of news inks have continually endeavored to maintain a low cost and improve their inks to meet everchanging conditions in newspaper plants. Among the facts which have been learned about misting are that: Ink in the form of a normal film will not throw from a single roll even at high speed; misting takes place only when the ink films come into contact, so that film splitting must occur; ink vehicles mist in the absence of pigments; long vehicles such as a linseed varnish mist more than a vehicle such as news ink oil.

Research has also shown that each vehicle and each ink possesses a threshold speed which must be surpassed before misting becomes a major factor; that an electrical charge on the particle is required to produce a large amount of mist; and that elastic strain in the ink filament is a factor in misting.

News ink misting creates messy conditions in newspaper pressrooms. Unless exhausted with expensive equipment, ink mist thoroughly covers pressroom walls, ceilings and floats through atmosphere with the greatest of ease. Now, as result of intensive research by J. M. Huber, Inc., and other inkmakers, Huber's Research Director, Dr. Ira Williams, predicts end of newspaper ink misting problems. News was gratefully received at ANPA Mechanical Conference in Atlantic City.

Dr. Williams detailed to the conference the steps which have been taken toward production of anti-misting inks, based on the research findings, and showed apparatus developed to speed up the testing of the inks.

Dr. Williams, whose headquarters are in Borger, Tex., is Director of Research for all Huber laboratories.

Discussion

Dr. Williams' explanation of the splitting of the ink film which occurs immediately when two film-covered rolls rotate away from each other was extremely interesting. The two films attempt to hang together and to form one film in practically a vertical position as the contact lines of rolls separated by rotation. It is the splitting of the film at high press speeds which cause the (vehicle) film minute fragments to fly into space as they are thrown off from the rotating rolls.

During the discussion period William O'Brien, Pressroom Supt. of the New York *Daily News* remarked that ink misting does not occur below a press web speed of 900 f.p.m. He also thinks durometer readings of rollers have effect on ink misting, that is, the softer the roller the more it will throw ink. In reply to an inquiry, Dr. Williams stated it makes no difference in ink misting with respect to composition rollers.

Al C. Miller, Pressroom Supt., Baltimore Sunpapers, stated he thinks increased heat in the rollers increases ink misting 50% when presses are operated at 50,000 papers per hr.

In response to a query by Production Mgr. Leslie J. Griner, Knight Newspapers, Dr. Williams stated newspaper executives can be assured that research on ink misting is not being neglected. In fact, said he, 50% of Huber's research work alone is directed at solution of the problem.

KEMP 10 TON OVAL POT installed by the Montreal La Presse to replace old oil underfired pots.

PUBLISHER SAVES 56% ON CASTING COSTS WITH NEW KEMP OVAL STEREO POT

Fuel Savings alone amount to $185.83 per month with Kemp Unit.

By installing Kemp equipment, this Canadian publisher reduced his cost per plate from 3.34c each to 1.46c...*a 56% saving.* Fuel savings amounted to *$185.83 per month* during the first twelve months. Also by casting at a *faster* rate with *less* spoilage, overtime costs have been slashed substantially—$4,000 were saved in the first year.

Casting room temperatures have *declined* from an average of 100-105 degrees to 80 degrees or lower. And instead of drossing 3 times a week as formerly, drossing is now done *once* a week with a *66% reduction* in dross losses. Another case where Kemp Engineering delivers the goods in terms of dollars saved for its customers. Why not find out how Kemp can save you money, too?

KEMP OF BALTIMORE

IMMERSION MELTING POTS

for technical information and facts on how we can help you with your melting problems, write:

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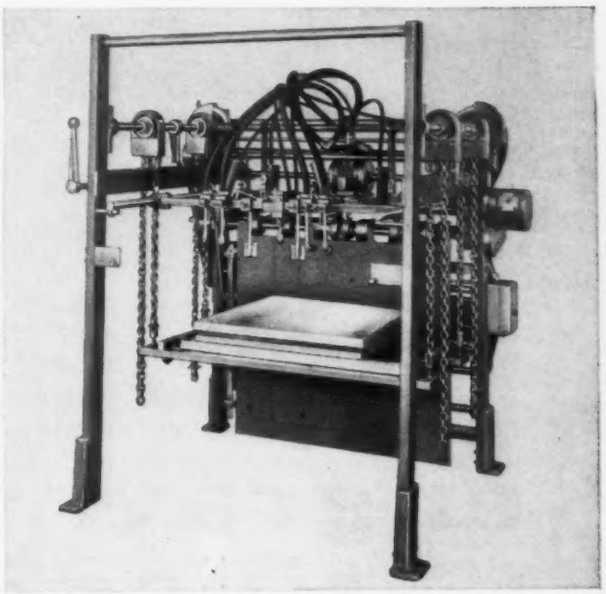
405 E. Oliver St., Baltimore 2, Md.

CARBURETORS • BURNERS • FIRE CHECKS • ATMOSPHERE & INERT GAS GENERATORS
ADSORPTIVE DRYERS • METAL MELTING UNITS • SINGEING EQUIPMENT • SPECIAL EQUIPMENT

Dexter Continuous Reloading Metal Sheet Feeding Eliminates Loading Time Losses



The Dexter Metal Sheet Feeder

The Dexter Metal Sheet Feeder automatically feeds sheets to press, coater, slitter or other machine. It handles stock from 38 to 24 gauge, 36 x 44" to 14 x 16", loads up to 6,000 lbs.

The feeder automatically separates and picks up metal sheets from pile and advances them to registering or feeding-in point.

Reloading mechanism eliminates need of stops to reload.

Should two sheets adhere, reject mechanism diverts them to reject tray without stopping machine or slowing down production.

Fewer stops and less tripping make for work of more uniform quality.

There is no marking or scratching of sheets.

Stock may be trucked into feeder by either electric or hand lift trucks or by means of floor load conveyors.

Special feeders can be supplied to handle up to 16 gauge, 48 x 144" and 30,000 lbs. load.

The services of our engineers and organization are available, without obligation to you, for consultation in development of automatic feeding of various types of machines used in your plant for handling tin plate, black iron or other metals in sheets.

Dexter Folder Company
General Sales Offices
330 West 42nd Street, New York 36, N. Y.
Boston, Philadelphia, Washington, Cleveland, Chicago, St. Louis
Agents in principal foreign countries

Conference Dates

(With Organization Names and Principal Officers)

American Photoengravers Assoc. — 1954 Conf., Hotel Jefferson, St. Louis, Mo., Oct. 11, 12, 13. Pres., D. H. Murnik, Oakland National Engraving & Gravure Co., 307 Tenth St., Oakland 7, Calif.; Exec. Secy., Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf. — 1955 Conf., Edgewater Beach Hotel, Chicago, June 6, 7, 8. Chairman of the Committee, Joseph E. McMullen, Prod. Mgr., Milwaukee (Wis.) *Journal;* Mgr., ANPA Mechanical Dept., Richard E. Lewis, 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute — 1954 Conv., Hotel Hershey, Hershey, Pa., Oct. 18, 19, 20. Pres. Sidney Satenstein, American Book-Stratford Press, Inc., 75 Varick St., New York 13, N. Y.; Secy., Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. — 1955 Conf., Netherland-Plaza Hotel, Cincinnati, Aug. 6. Pres., Howard Keefe, Sales Representative, Cincinnati Lithographing Co., 4318 Duneden Ave., Cincinnati 36; Secy.-Treas., Dave Walker, Adm. Asst., Graphic Arts Assoc. of Michigan, 320 W. Lafayette St., Detroit 26.

Graphic Arts Trade Assoc. Executives — Secy., Arthur L. Johnson, Graphic Arts Assoc. of Milwaukee, 704 W. Wisconsin Ave., Milwaukee 3, Wis.

Gravure Technical Assoc.—1955 Annual Meeting, Drake Hotel, Chicago, Ill., Feb. 2, 3, 4. Pres. John E. Hazel, New York *Daily News*, 700 Pacific St., Brooklyn 17; Secy.-Treas., Frank Sportelli, International Color Gravure, Inc., 39 W. 60th St., New York 23, N. Y.; Secy., Edward S. St. John, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conf. — 1955 Conf., Sheraton-Cadillac Hotel, Detroit, Mich., Jan. 16, 17, 18. Pres., Frank Dassori, Pressroom Supt., Detroit *Times;* Secy.-Treas., Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf. — 1954 meeting, Hotel Custer, Sept. 25-26, Galesburg, Ill. Pres. Eldon L. Martin, Galesburg (Ill.) *Register-Mail;* Secy.-Treas. Wilbur L. Augspurger, Peoria (Ill.) Newspapers, Inc.; Chairman Supplymen's Committee, Joseph D. Goggin, Newspaper Publishers Supply Co., 1639 N. Lorel Ave., Chicago 39.

Intl. Assoc. Electrotypers & Stereotypers — 1954 Conf., Greenbrier Hotel, White Sulphur Springs, W. Va., Oct. 28-Nov. 1. Pres., Carl N. Becker, Becker Electrotype Co., 144 N. Water St., Milwaukee 2, Wis.; Exec. Secy., A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen — 1954 Conv., Bellevue-Stratford Hotel, Philadelphia, Aug. 8-11. Pres., Howard N. King, The Maple Press, York, Pa.; Exec. Secy., Pearl E. Oldt., Rm. 806, Transportation Bldg., 307 E. Fourth St., Cincinnati 2, O.; Convention Chairman, Ray Miller, 300 Valley View Rd., Media, Pa. 1955 Conv. Netherland-Plaza Hotel, Cincinnati, Aug. 7, 8, 9, 10.

Intl. Graphic Arts Education Assoc. — Exec. Secy., Samuel M. Burt, 719 Fifteenth St. N. W., Washington 5, D. C.

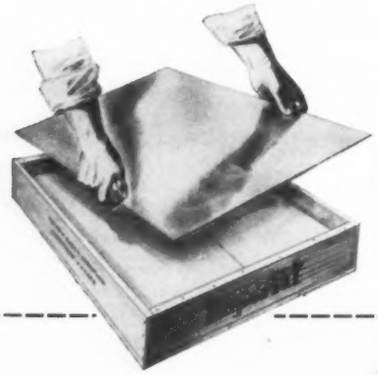
Intl. Typographic Composition Assoc. — 1954 Conv., Hotel LaSalle, Chicago, Sept. 23, 24, 25. Pres., Harold L. McGirr, Morris & Walsh Typesetting Co., Inc., 129 Lafayette St., New York, N. Y.; Frank M. Sherman, Exec. Dir., 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf. —Secy.-Treas., Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—1954 Meeting, Town House Hotel, Kansas City, Kan. Sept. 11-12. Kansas Pres., Howard Wilson, Jetmore (Kan.) *Republican* Secy-Treas., Larry Miller, Gen. Mgr., Kansas Press Assoc., 701 Jackson St., Topeka, Kan.; Missouri Pres., Louis N. Bowman, *Tri-County News*, King City, Mo.; Secy-Treas., William A. Bray, Missouri Press Association, 220 Walter Williams Hall, Columbia, Mo.; Supplymen's Committee Chairman, Clark O. Murray, Inland Newspaper Supply Co., 422 W. 8th St., Kansas City 5, Mo.

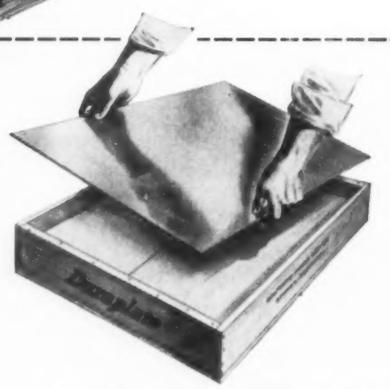
Lithographers National Assoc. — Exec. Dir., W. Ford Maxwell, 420 Lexington Ave., New York 17, N. Y.

Imperial engraving zincs consistently good



IMPERIAL REGULAR
(Blue Redibak)

Meets the requirements for all usual applications.



IMPERIAL DURAPLATE
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Alloyed for extra tough duty. Unusually resistant to buckling.

IMPERIAL TYPE METAL COMPANY

SERVING THE GRAPHIC ARTS *Exclusively*

CHICAGO 50 • NEW YORK 7 • PHILADELPHIA 34

IN CANADA: LATIMER, LIMITED, TORONTO 2-B

P.S.—Imperial *Regular* Zinc and Imperial Duraplate are *both* always available. No premium price for Duraplate. Order either or both to meet your requirements.

SPEED PRODUCTION WITH RICHARDS!

- SAWS
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For further information on these and other **RICHARDS EQUIPMENT,** *Saws — Routers — Mortisers, please write*

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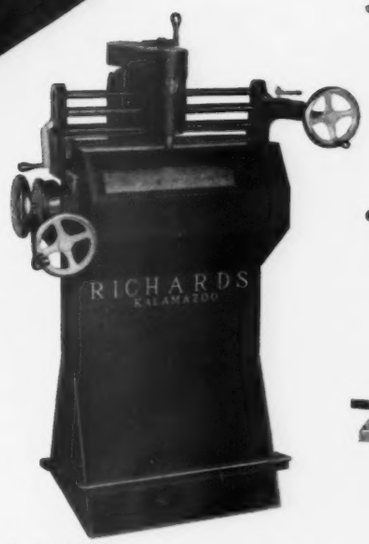
NEW MODEL

Code: PMRS

'MULTIFORM' RADIAL ROUTER
For Straightline and Fine Detail Routing
Patented Straightline Control Feature



Code: MI-B

ENCLOSED CURVED PLATE ROUTER
with new close coupled single belt drive
Ball bearing construction throughout

Code: EST-27x36 Table
ESST-32x42 Table

'ELECTROMATIC' SAW TRIMMER
For Stereotypers, Electrotypers, Photoengravers

Mid-Atlantic Mechanical Conf. — 1955 Conf., Ambassador Hotel, Atlantic City, N. J., March 17, 18, 19. Jointly sponsored by the New Jersey Press Assoc. and the Pennsylvania Newspaper Publishers Assoc. Conf. Dir., Theodore A. Serrill, PNPA General Mgr., 304 Telegraph Bldg., Harrisburg, Pa.

National Assoc. of Litho Clubs — 1955 Conv. Milwaukee, Wis., May 5-7 (hotel to be announced later). Pres., Jack Blades, Washington, D. C.; Exec. Secy., Frank Mortimer, U. S. Government, Printing Office, Washington, D. C.

National Assoc. of Photo Lithographers— 1954 Conv., Hotel Statler, New York, N. Y., Sept. 22-25. Pres., A. J. Fay, 75 Varick St., New York 13, N. Y.; Exec. Vice Pres., Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc. Pres., Richard B. Tullis, Pres. Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh 33, Pa.; Secy., James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Div. — 1954 meeting, Conrad Hilton Hotel, Chicago, Oct. 18-20. Gen. Chairman, Peter J. Bernard, Director of Personnel and Safety, H. Wolff Book Mfg. Co., 508 W. 26th St., New York 1, N. Y.; Staff Rep., Fred Lubet, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Mechanical Conf. — 1954 Conf., Hotel Statler, Boston, Mass., Oct. 16-17. Pres., J. William Powers, Mech. Supt., Burlington (Vt.) *Free Press;* Secy.-Treas., Walter C. Crighton, Comp Room Supt., New London (Conn.) *Day.*

New York State Capital District Mechanical Conf.—1955 Conf., Albany, N. Y., January (hotel and dates to be announced later). Pres., Floyd Laurenty, Schnectady (N. Y.) *Union-Star;* Secy., Walter E. Lewis, Asst. Supt., Schnectady *Union-Star.*

Northwest Mechanical Conf.—Pres., William Benson, Pressroom Foreman, St. Paul (Minn.) *Pioneer Press* and *Dispatch;* Secy.-Treas., Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conf. — 1954 meeting, Multnomah Hotel, Portland, Ore., Sept. 17-19. Pres., Wm. E. Gibbons, Prod. Mgr., Portland (Ore.) *Journal;* Secy., Don Newhouse, Prod. Mgr., Portland (Ore.) *Oregonian;* Chairman Supplymen's Committee, Intertype Corp., Portland, Ore.

Printing Industry of America—1954 Conf., Hotel Statler, Detroit, Mich., Nov. 15-19. Pres., James J. Rudisill, Rudisill & Co., Lancaster, Pa.; Gen. Mgr., James R. Brackett, 719 Fifteenth St., N.W., Washington 5, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1955 Meeting, Boston, Mass., May 11, 12, 13 (hotel to be announced later). Pres., John Davis, jr., Exec. Vice Pres., Judd & Detweiler, Inc., Florida Ave. and Eckington Pl., N.E., Washington 2, D. C.; Exec. Secy., John Reed, 719 Fifteenth St., N.W., Washington 5, D. C.

Rocky Mountain Mechanical Conf.—1954 Conf. Albany Hotel, Denver, Colo., Oct. 1, 2, 3. Pres., Emory Cross, Scottsbluff (Nebr.) *Star-Herald.* Sponsored by Colorado Press Assoc.

Screen Process Printing Assoc. — 1954 Conv., Jefferson Hotel, St. Louis, Mo., Oct. 30-31, Nov. 1-2. Pres. Stanley R. Snider, Sniders' Poster Process Co., 2638 St. Louis St., New Orleans, La.; Exec. Secy., Robert H. Blundred, 549 W. Randolph St., Chicago 6. Conv. Committee Chairman, William Fraser, 1627 Locust St., St. Louis, Mo.

SNPA (Eastern Div.) Mechanical Conf.— 1954 Conf. Whitley Hotel, Montgomery, Ala., Aug. 23, 24. Conf. Chairman, C. Leroy Ray, Mechanical Supt., Winston-Salem (N. C.) *Journal* and *Sentinel;* Secy., Ray B. Crow, Southern Newspaper Publishers Assoc., P. O. Box 1569, Chattanooga 1, Tenn.; Chairman of Supplymen's Committee, James R. Geer, Coosa River Newsprint Co., Coosa Pines, Ala.

SNPA (Western Div.) Mechanical Conf.— 1955 Conf., Dallas, Tex., March 6, 8, hotel to be announced later. Conf. Chairman, Carl P. Lawrence, Tulsa (Okla.) *World & Tribune;* Secy., Walter Johnson, jr., P. O. Box 1569, Chattanooga 1, Tenn.; Chairman, Supplymen's Committee, Eddie P. Gaughan, New England Fibre Blanket Co., 1225 S. Trenton Ave., Tulsa 10, Okla.

Technical Assoc. of the Graphic Arts — 1955 Conv., Somerset Hotel, Boston, Mass., May 9, 10, 11. Pres., G. L. Erikson, Braden-Sutphin Ink Co., 3800 Chester Ave., Cleveland 14; Secy.-Treas., George S. Hammer, 8 Cherry St., Marblehead, Mass.; Convention Chairman, Merrill Friend, Technical Director, Spaulding Moss Co., 113 Franklin St., Boston 10, Mass.

Advertising Executive Takes Lusty Swing at Vertical Shrinkage—Engraving Equipment Improvements—High Speed News Pictures—In-Plant Report on High Speed Etching—9 Col. Paper—Dispatch Room No Kid's Job

THE combination engraving-advertising session at the Atlantic City (N. J.) ANPA Mechanical Conference in June produced an attack on vertical ad shrinkage in newspapers by the president of the National Advertising Executives Assoc. Donald M. Bernard called upon mechanical men to interpret vertical shrinkage in language that is understandable to advertising executives. Bernard is also Advertising Director of the Washington (D. C.) *Post* and *Times-Herald*.

Paying for Space Not Given

He labeled his subject as a discordant note in the program, but a serious one which must be faced. He said too many advertisers are paying for space which the newspapers are not giving them because of vertical shrinkage. The speaker asked that mechanical men support the Standard of Measurement Clause. Advertisers, he thought, should pay only for the lineage that's given.

Bernard noted that a dry mat with 2% shrinkage loses two lines out of every 100 lines. This gives the advertiser less lineage vertically which he described as creating a nation-wide problem. He defended advertising men by saying that they have attempted to explain to advertisers about the variables encountered by newspapers.

Shrinkage Reflects on Ad Men

Continuing his attack, he asserted that the least the mechanical executives can do is to give the advertising space that's been ordered. He also reminded the audience that mechanical men's work reflects upon what advertising men have sold.

Bernard told of one advertiser who placed a 1000 line ad in a number of newspapers during a national campaign. He said that only 29 newspapers out of 74 metropolitan dailies which were sent the ad, actually gave the right amount of space that was ordered. He further charged that 46 of these papers billed for the space ordered but didn't give it to them.

He thought the Standard of Measurement Clause must be either enforced as a decent, honest way of doing things, or abandoned. The advertising executive advised that nothing is mentioned in Standard Rate & Data Service about vertical shrinkage.

Use Understandable Language

Mr. Bernard asked the ANPA Mechanical group to do two things as follows: (1.) Compute vertical shrinkage in language that is understandable to the advertising executive. Tell the newspaper's advertising manager how many lines per 100 are lost through vertical shrinkage. (2.) Make sure every person concerned in your organization takes a look at national advertising orders and gives the advertiser the proper amount of space called for. He said newspapers must stop charging for 1000 lines when they only give 970 lines.

R. W. Tranter, Mechanical Supt., Boston *Herald-Traveler*, asked about ads which are received with cut-off rules on them. Bernard replied that advertising people have been trying to keep such rules off their ads.

Distribution of White Space

Proper distribution of white space in ads was a topic brought up by George Woodman, Mechanical Supt., Ft. Worth (Tex.) *Star-Telegram*. Bernard told him that if the white space looks better at the top or bottom of the ad or distributed in between, it doesn't matter. The important thing, he said, is to use good judgment and to give the space specified in the order.

George Fuller, Stereotype Supt., Cleveland *Press*, told of an experience in Cleveland where the newspapers got together with advertising men concerning what an ad should measure to allow for shrinkage. Fuller suggested that advertising executives get together with their printers and electrotypers, and tell them the proper dimensions of an ad with allowances for shrinkage.

John Park, Production Mgr., Chicago *Tribune*, then told of a meeting between representatives of the ANPA Mechanical group and the NAEA on the problem of vertical shrinkage of ads.

In addition to Mr. Bernard's talk, which touched off considerable comment, other interesting papers were presented by more than a half dozen speakers. The chairmen of the meeting were Mr. Park and J. L. Stott, Richmond (Va.) *News-Leader & Times-Dispatch*.

Engravaplate Machine

Benjamin Sugarman, President, Consolidated Photo Engravers & Lithographers Equipment Co., described the Engravaplate Color Correcting Engraving Machine which is designed to produce a 3 col. by 4 in. plate in 12 min. per color plate. He said the Hell Engraving Machine is capable of engraving to a depth of 0.009 in. in the highlights, 0.006 in the middletones and 0.003 in the shadows.

Sugarman said the dot produced on the Hell machine is suitable for stereotyping. He announced that an engraving machine designed specifically for the commercial and magazine printing industry would soon be available. He also mentioned that a reducing and enlarging machine was in the works.

Fairchild Engraving Improvements

New Advances in Fairchild Electronic Engraving was the title of a talk delivered by J. A. V. Hyatt, Sales Mgr., Graphic Arts Div., Fairchild Camera & Instrument Corp. Hyatt noted that 150 modifications have been incorporated into the design of Scan-a-graver electronic engraving machines since the introduction two years ago of the 6 in. by 8 in. Scan-a-Graver Cadet model.

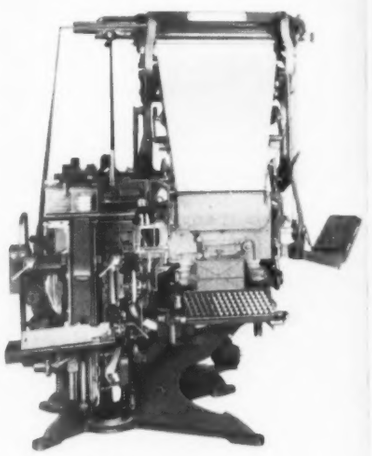
The speaker described the recently developed Scan-a-sizer Engraving Machine which is designed to enlarge or reduce the copy while the engraving is made. The machine is described in the May 1954 issue of *Printing Equipment Engineer*.

One of the features of this enlarging and reducing mechanism is that it can be adjusted to act more in one direction than the other, thereby producing a controlled distortional scaling. Hyatt said it will enable operators to more easily fill a desired space in a given page layout or it may be possible to make photographs of narrow rooms used in advertising to appear more spacious. He claimed that an 8 in. by 10 in., 85 line screen plate can be engraved on the machine in 24 min.

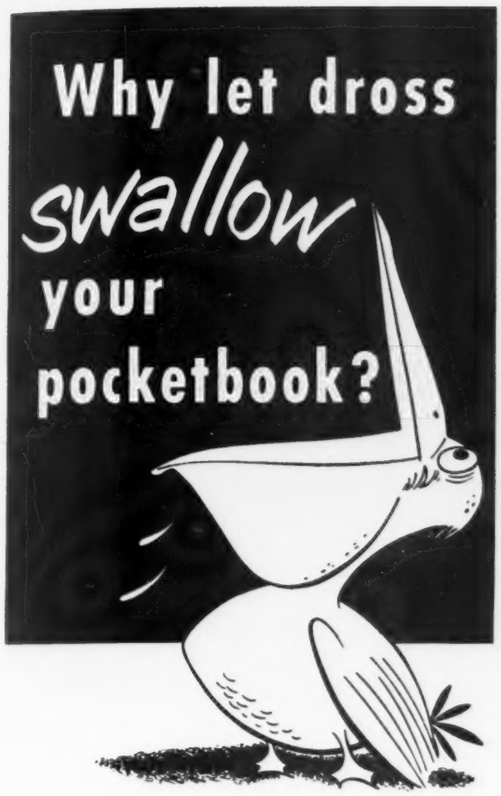
Variable Response Unit

The Fairchild official then went into a description of an attachment for either the Scan-a-graver or Scan-a-sizer machines called the Variable Response Unit. It is a quality control device that greatly enlarges the areas and degree of black and white quality control. He added: "In the design of the Variable Response Unit, we place a control at the one step in the sequence of operations that will enable an operator to take into consideration all of the variables that occur during the preparation of the photograph and from then until the final image is reproduced in the newspaper. An engraving is produced that will be correct for many of these conditions."

Hyatt also mentioned briefly that work is continuing on the application of Fairchild equipment to color. He said the techniques being investigated eliminate the need for photographic color separation. He added that tests are being conducted by the ANPA laboratories in cooperation with the Fairchild firm.



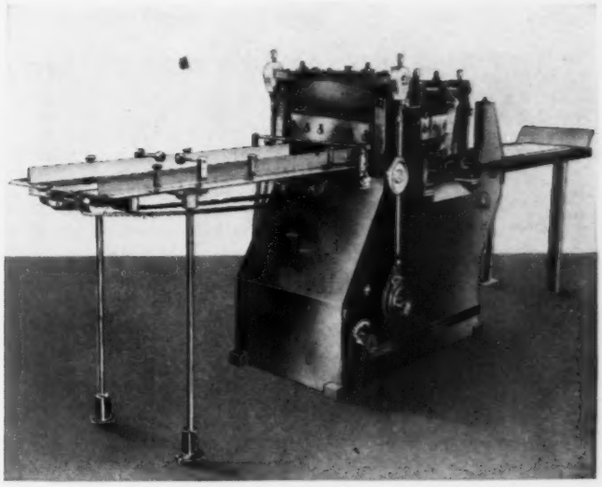
Linotype's Comet Wins Design Award—The Mergenthaler Linotype Co. has won a Modern Design Award, presented by *Design News Magazine* in recognition of the design of the Blue Streak Comet linecasting machine.



Send for an Imperial Dross Drum. To avoid waste, follow our remelting instructions. Exchange your dross for an equal weight of Imperial Plus Metal.

Imperial
TYPE METAL COMPANY
SERVING THE GRAPHIC ARTS *Exclusively*
PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

To Cut Costs... Stitch and Trim in One Operation



McCain 3-Knife Automatic Trimmer

The McCain Automatic 3-knife Trimmer, attached to any Christensen Gang Stitcher, will trim books on three sides at speeds up to 7,500 per hour.

Two-up books can be trimmed and cut apart, or a bleed trim can be cut from between the two books . . . all in *one automatic operation.*

The automatic McCain Trimmer will handle all your saddle stitched books from almost the smallest to the largest, and from the thinnest to the thickest.

No more need of skids of books waiting for a separate trimming operation: the operator that used to remove untrimmed books from the stitcher delivery can now pick up completely trimmed books, ready for wrapping, from the McCain delivery.

Simple positive adjustments make the McCain equally profitable on long or short runs.

Think! The McCain not only speeds up production and cuts operating costs; it also saves valuable floor space, and helps you achieve faster delivery to your customer of a high quality product.

Any Dexter representative will be glad to study your trimming problem or arrange for a visit to see, in actual operation, one of the many McCain Trimmers now working in plants across the country.

Dexter Folder Company
General Sales Offices
330 West 42nd Street, New York 36, N. Y.
Boston, Philadelphia, Washington, Cleveland, Chicago, St. Louis
Agents in principal foreign countries

1954 SHATTERING ALL WORLD RECORDS

Roger Bannister did the impossible . . . *the 4-minute Mile*
Parry O'Brien did the impossible . . . *the 60-foot Shot-put*
Stan (The Man) Musial . . . *hit 5 Home-runs in one day*

1954 "Gold-Mine" BAUMFOLDERS . . . *everywhere daily breaking production (profit) records*

TO YOU . . . MY FRIEND:

We never "knew it all"—we never felt *this* or *that* improvement, in itself, was of world importance. We figured that always . . . somewhere . . . somebody might have *additional new* ideas that improved performance, ease-of-operation, quicker setting . . . and we have—for 36 years—constantly looked for, found and adapted everything helpful . . . especially everything that *increased production*, therefore *your net profit*.

Today . . . the 1954 BAUMFOLDER "Gold-Mines" challenge the world for production (therefore profit to you) . . .

Today . . . the BAUMFOLDER leads the world by a mile in LOWEST PRICES for fastest, finest Folders ever designed.

Won't you ALLOW US TO exchange your pre-war Model for a '54 "Gold-Mine"? 25,000 BAUMFOLDER USERS (many times the Folder volume the world ever knew) always enabled us to price them so low . . . they are so value-packed per dollar investment and the small yearly depreciation is so slight . . . that your old Model traded in now will stand out on your books as the most "economic" investment you ever made . . . as will your '54 "Gold-Mine" in 1974.

We urge the pay-for-itself plan (bank interest rate) because we want to feel that we never take any capital out of your business, but, on the contrary, put capital into your business EVERY month with its INCREASED VELVET MONTHLY PROFITS which will greatly exceed the small share that pays for your "Gold-Mine".

We are "dedicated" to increasing your folding profit . . . won't you do me the favor to spare me a few minutes to talk it over? Call (collect, of course) . . . Lombard 38164/5/6. If I am presumptuous, do forgive me for feeling YOUR maximum folding profit is MY business.

Gratefully, "RUSS" BAUM

Russell Ernest Baum, Inc., 615 CHESTNUT STREET, PHILA. 6, PA.

Fast Handling of ROP News Pictures

An interesting talk and slide presentation was made next by Robert Dumke, Production Research Coordinator, Milwaukee *Journal*, whose subject was *Handling ROP News Pictures at High Speed*. Dumke revealed the information obtained from a survey taken recently among seven newspapers throughout the country who have been using ROP color news pictures. Among the data presented was the time consumed in the various operations by each newspaper. Because of the wide variation in the time spent on certain operations, Dumke said he wondered whether these were the hours worked by one person or by several.

Printing in Saudi Arabia — Above is shown a typical scene in a printing plant in Saudi Arabia and the modern presses being used in that part of the world. Ustaz Mohammed Madini Ibn Hamid (left), Acting Director of the Printing, Press and Publication Establishment, Ltd., Jiddah, Saudi Arabia, is shown checking a press sheet with Dr. Mohammed Ibrahim, former Professor of Journalism, Cairo University, who is in charge of the company's technical staff. In the background is one of six modern presses. Jiddah Press, as the firm is sometimes called, includes Arabian American Oil Co. among its customers.

The *Journal* executive said none of the papers who responded have ever been put to the full test of finding out exactly how fast they could do a color job. He felt, however, that if a color job had sufficient value, it could be turned out in less than 4 hrs. by the use of the one-shot camera.

With an electronic color scanner, which he said would be available in the near future, Dumke asserted that it should be possible to do a color transparency in about the same time.

He continued: "With the one-shot camera, color correcting masks would be made and registered onto the original separation negatives and then three bromide prints made. The three prints could be set at the proper angles so that the engraver could shoot them in one shop without changing the screen angle, or the three pictures could be shot separately and then stripped down on one piece of metal so that again they could be etched on one flat.

"With the color scanner, the transparency would be fastened to a drum and the machine set for proper electronic masking of the transparency so that the three black and white film positives (or four) would be properly color corrected. These three or four black and white film positives then could be set up at the proper angle so that the engraver could screen them all in one shot and print them all on one flat. Or they again could be shot separately and printed so they would all go on one flat to save time in the printing and etching departments."

Dow-ANPA Etching Process

Production data on the Dow-ANPA High-Speed Etching Process as used in the plant of Item Publishers, Inc., Yonkers, N. Y., was presented by Alex Poletsky, Engraving Supt., Westchester County (N. Y.) Newspapers. In a test conducted in that plant, they were able to etch ten flats of 18 in. by 24 in. magnesium metal in 1 hr. He said a single cut can be processed in a maximum of 20 min. from the time it is received from the picture editor.

Poletsky said that in the actual etching process itself, the time varies from 2 min., 20 sec. to 3 min., 30 sec. on 60-line screen. Because that plant services 13 newspapers and much of the work is rematted, they average 0.005 in. to 0.007 in. in the highlights, 0.0035 in. to 0.005 in. in the middletones, and 0.002 in. to 0.003 in. in the shadows.

On control of the etching bath, he said "we always test our bath at the beginning of each day's work and test again when we have finished for the day." He claimed the bath loses some of its potency and volume during idle periods due to evaporation. He recommended taking the tests at the start and finish of each working day. He said also,

it was advantageous to supply all plates to the etcher as closely together as possible. The speaker added that this saves chemicals and time.

Engravers Facing Test

Harry Davidson, Production Mgr., San Francisco *Call-Bulletin*, was the concluding participant on the engraving end of the program. It was his opinion that both newspaper and commercial photoengravers " . . . are probably facing the greatest test of all the crafts."

Davidson said the pictorial part of the average daily paper will be the biggest single factor in maintaining circulation that newspapers now enjoy. He added: "You can tell a story, but you must also see a picture."

The speaker said that newspaper color was proof that collective thinking on the part of all concerned can beat any problem. What he said was needed more were improvements in everyday black and white reproduction.

A slide presentation and verbal description of a color engraving register method as developed at the Miami (Fla.) *Herald* was related by that newspaper's Research Director, Vernon Spitaleri. The technique involves mounting magnesium plates in register on a magnesium base.

Not Interested in What Large Papers Think About 9-Col. Page

Declaring that he wasn't interested in what the large metropolitan newspapers think about the 9 col. newspaper, the next speaker, John N. Barron, Composing Room Supt., LaSalle (Ill.) *News-Tribune*, told of advantages of this type of makeup and backed up his comments with figures as compiled on his paper. The *News-Tribune*, a small daily, changed over to the 9 col. basis in October 1953.

Barron asserted that it has solved many of their problems, saved them money and made their work easier. Comparing a six month period of putting out a 9 col. paper with the identical period in 1953 when they issued an 8 col paper, he presented the following figures: ran 72 less pages in 1954; had 40,152 in. more of total space; ran 19,967 in. more of advertising; and used 20,185 in. more of news copy.

Regarding the thinking of newspaper men toward the 9 col. paper, the speaker said he thought they fell into two groups. One group, he stated, understand the advantages of 9 cols. and is making plans to change over to it. The other group doesn't want to get involved in changes. He added, possibly this is because they are afraid to do anything new, but rather than admit their real reason, they dismiss the whole 9 col. possibility with some specious argument like "shrinkage of an 8 col page will do as good a job of newsprint saving" or "it would cost us $40,000 to change to 9 cols." He said it cost the *News-Tribune* $101 to change over.

Benefits From New Makeup

On the advantages of the 9 col. newspaper, Mr. Barron had this to say. Newsprint saving on that paper has amounted to 6½%. Press capacity has been increased 12½%. There are fewer double runs as press units are now available. Formerly, they were running double two days a week, but have had only three or four double runs since Christmas 1953. They are able to run color more often now without going into a double run, as additional press units are available to accommodate this color.

There is less paper waste, fewer rolls to strip, reduced number of roll changes, fewer press stops and increased paper storage facilities, he claimed.

He was asked what the advertisers and readers think about the 9 col. page. Most of the readers, he said, can't tell the difference unless they compare the 8 col. and 9 col. page. The advertisers are like the readers and can't tell unless they use a full page.

No Kid's Job

The running of a newspaper's dispatch room is "no job for a kid," said Harold Mintum in the concluding address of the session. Mintus, who is Production Mgr. of the Pittsburgh (Pa.) *Press*, spoke on the subject, *Importance of Proper Copy Specifications and Layout*. The person in charge of a dispatch department, he declared, should be smarter than the production manager. He termed him the "policeman" of copy that he received and added, that if there is any question about this copy it should immediately be sent back for clarification.

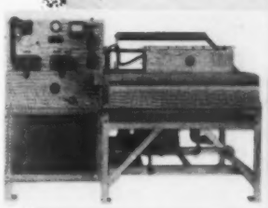
Mintum stated that he doesn't feel newspapers have been sold on good typography. Good typography, he continued, is tied to good copy. He then posed the question as to what constitutes good copy. In his answer, he said any copy that anyone handling it can understand. Copy must be clear enough to be handed on from one shift to the next without

Chemco's Newest Contribution to Fast, Fine Quality Photoengraving

Dow-Chemco

MAGNESIUM ETCHING MACHINE

First in operation in a widening number of photoengraving plants, the Dow-Chemco Magnesium Machine* is fast proving its superiority on the job. Patterned after the original Dow design, it incorporates improvements developed through Chemco's long experience in photoengraving equipment, design and production.



Like all Chemco equipment, the Dow-Chemco Magnesium Etching Machine is built to highest quality standards . . . to provide lasting, dependable, operation. Of heliarc welded heavy gauge stainless steel, it includes the best available motor, refrigeration unit pump, exhaust blower, thermostatically controlled immersion heater, electrical instruments and controls.

This quality doesn't cost . . . it pays in assured longer life, trouble-free service and minimum lost engraver's time. For the measurable advantages it provides, Dow-Chemco is the least expensive etcher you can buy and use!

* Produced under license from The Dow Chemical Co.

For up-to-date details on the Dow Etch Process, contact the Magnesium Department, The Dow Chemical Company, Midland, Michigan

IF IT'S chemco IT'S BEST FOR PLATEMAKING

chemco PHOTOPRODUCTS COMPANY, INC. GLEN COVE, N. Y.

NEW YORK • CHICAGO • DETROIT • BOSTON • NEW ORLEANS • ATLANTA • DALLAS

need for a great amount of explanation. He suggested trying to standardize on copy size, typing and special instructions.

Equipment & Supplies

(Continued from Page 12)

given a routine touch-up, they may be held in the fingers. Sponsor further states the finish is a penetrating type that effects no dimensional change in the mat, and the black finish is actually part of the metal and provides excellent wearing qualities. If additional information is desired, please request PEE No. 190.

Miller Press Instruction Manual

A new instruction manual for the Miller 21 in. by 28 in. SW Single Color Letterpress has been prepared by Miller Printing Machinery Co. The text is accompanied by 90 illustrations in an explanation of the operation, adjustments and maintenance of the press. Other parts of the manual include a recommended maintenance schedule, a 15 page lubrication chart, a chapter on trouble shooting and a chapter on solving unusual press problems. For information on obtaining a copy of this manual, please mention PEE No. 207 in your request.

Testing Instrument Catalog – The 1954 Gardner Laboratory, Inc., testing instrument catalog is now available, according to Paul N. Gardner, Pres. In the 58 page illustrated publication are described testing instruments which can be used in the Graphic Arts Industry, including balances, magnifiers, spatulas, small ink mills, mixers, mullers, and grind gauges and film thickness gauges. Please specify PEE No. 194 if additional details are desired.

geared to today's newspaper needs

the SIGNODE-PARKER Automatic Wire Tying Machine

Gives trouble-free operations against strict daily deadlines.

- Handles bundles up to 27 inches in height
- Capacity limited only by the speed at which bundles can be fed
- Breaks mailing room bottlenecks
- Reduces circulation costs
- Speeds deliveries
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For complete details, write

SIGNODE STEEL STRAPPING CO.

2667 N. Western Avenue
Chicago 47, Illinois

40th ANNIVERSARY SIGNODE 1913 ★ 1953

14th District Craftsman Meet

Nearly 150 Craftsmen from the 14th District of the Intl. Assoc. of Printing House Craftsmen met recently in Minneapolis for their annual conference. The conference program was arranged under the direction of Francis O. Olson, Conference Chairman; Darryl Dahl, Educational Chairman of the Minneapolis Club; Abel O. Norbeck, 14th District Representative; and Alfred Barnes, Minneapolis Club President.

The Conference nominated Fred Allen, Winnipeg, Can., for District Representative. George Edmeyer, St. Paul, Minn., was named District Treasurer to succeed Walter Brunner, Minneapolis, who retired from this office after serving for ten years. Nels Lundell, Minneapolis, was named District Educational Chairman, and Carl Ketchen, Winnipeg, Can., was chosen District Membership Chairman. The Winnipeg Craftsmen's Club was awarded the 1955 Conference.

Highlight of the two-day meeting was an address by Intl. First Vice Pres. Thomas P. Mahoney of Chicago. The educational part of the program included clinics held on offset and letterpress printing, production, management costs and estimating problems. Consideration was also given at the Conference for the formation of a Craftsmen's society by the 14th District together with the Sixth District.

Dwiggins-Griffith Papers in Graphic Arts Library

The first installment of the Dwiggins-Griffith papers, a typographic anthology, was recently moved to the Margaret I. King Library of the University of Kentucky, Lexington, Ky. It formerly was located in the East. Included in the collection is the correspondence, extending over 20 years, between William Addison Dwiggins, American artist and designer, and Chauncey H. Griffith, former Vice Pres. and Director of Typographic Research and Development for Mergenthaler Linotype Co. Dwiggins and Griffith were interested in the development of typefaces and in the scholarly and philosophical aspects of letter anatomy and typography. Griffith, currently serving as typographic consultant for the company, organized the collection before it was moved to Kentucky. He also has provided a period of personal instruction for members of the library staff who will administer the collection, which was transported for the availability of typography students from the Middle West and South.

Monotype Sales

The newly-formed Lanston Monotype Corp. is the sales and service company for the products of Lanston Monotype Machine Co., it was announced recently. All communications formerly addressed to Philadelphia should be sent to the principal office of Lanston Monotype Corp.,

261 Madison Ave., in New York 16, N. Y. District offices will be continued in Atlanta, Boston, Chicago, New York, Toronto and Philadelphia as part of the sales and service organization of Lanston Monotype Corp. New York corporation officers include William H. Walling, Chairman of the Board; Robert F. Nelson, Pres.; Carl C. Sorensen, Vice Pres.; Joseph P. Quigley, Sales Mgr., Monotype Div., Donald H. Neale, Sales Mgr., Matrix Div.; Peter Moller, Sales Mgr., Photomechanical Div.; John Anderson, Art Director; John C. Mayr, Technical Correspondent, and A. J. Henderson, jr., Sales Mgr. Export, Barrett and Special Products Div. The new telephone number in New York is MUrray Hill 2-6944.

NEWS ITEMS

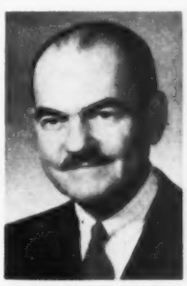
Edwards Elected — R. B. Tullis, Pres. of Miller Printing Machinery Co., has announced the election of D. E. Edwards as Vice President and Controller of the company. Edwards will assist in the management of and be responsible for the operation of the Miller European subsidiaries.

EDWARDS

Frank A. Morrison of Morrison Printing Ink Co., was elected president of the Natl. Assoc. of Printing Ink Makers at the group's recent 40th annual meeting in Chicago. Fred A. Weymouth of Interchemical Corp., Printing Ink Div., former Treasurer, became Vice President, and Joseph S. Hart of J. M. Huber Corp., was elected Treasurer. Herbert B. Livesey, jr., continues as Secretary. Added to the board of directors were Herbert F. Gaetjens of Gaetjens, Berger & Wirth, to represent the Middle West, and L. C. Herkness, jr., of Charles Eneu Johnson Co., to represent the Middle Atlantic states.

MORRISON

William H. Walling has been elected Chairman of the Board of Lanston Monotype Corp., the newly formed sales and service subsidiary of Lanston Monotype Machine Co. Walling, who has been a Director and a member of the Executive Committee of Lanston Monotype Machine Co. since 1951, is also presently Vice Pres. and Chairman of the Executive Committee of Printing Industry of America. The executive offices of Lanston Monotype Corp. are at 261 Madison Ave., New York, N. Y. Other officers of the new company include Robert F. Nelson, President; and Carl C. Sorensen, Vice Pres.



WALLING

Battelle Expansion—Battelle Memorial Institute, Columbus, O., recently purchased a 397 A. site west of Columbus. According to Dr. Clyde Williams, Battelle President, the land is to be used for large scale engineering and agricultural projects. Several small buildings are to be built.

Reproduction Available

A four-color printed reproduction is being offered by the Minnesota Mining & Mfg. Co., St. Paul, Minn., as an example of the quality obtainable from 3M brand pre-sensitized photo offset plates. The 9 in. by 12 in. picture is a reproduction of an action painting by wildlife artist Les Kouba. It pictures a large mouth bass leaping from a lily pond for a dragonfly. The 3M Company offers the painting upon request and attributes the quality of the reproduction to the smooth, grainless aluminum surface of the plate.

Ink Company Expands—Gaetjens, Berger & Wirth, Inc., officials have established Gaetjens, Berger & Wirth de Mexico, S. A. de C. V., Calzada Ixtalpalpa 326-B, Mexico D. F., Mexico. A general line of inks for the Graphic Arts industry will be produced in the factory, according to Pres. William Recht. A litho

going places?

GO

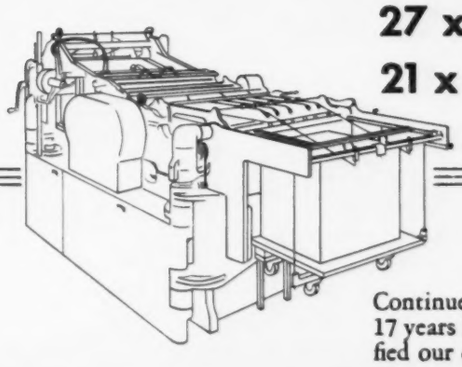
MILLER

via:

THE TWO-COLOR ROUTE

27 x 41 TY

21 x 28 TW



Continued satisfaction over 17 years has more than justified our expectation.

MILLER PRINTING MACHINERY CO.

1103 REEDSDALE STREET, PITTSBURGH 33, PA.

Copy and layout by Mr. R. Moore Smith, Manager Franklin Printing Co. Philadelphia, Pa.

Monomelt

The Only Hot Metal Feeder for Line-Casting Machines, Ludlow and Elrod

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HYDRAULIC SHAVER

POWER SHEAR & METAL KNIFE

MOLDING PRESSES

HYDROCASTER & PRESTOCASTER

MAGNESIUM BASE

PLASTIC & RUBBER Plate Making Supplies

COMPOSING ROOM AND ELECTROTYPER'S SUPPLIES AND EQUIPMENT

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AUTOMATIC MARGIN CONTROL
AUTOMATIC WEB TENSION

SPECIAL PRINTING MACHINERY

HUCK COMPANY
37 Wall St. New York 5

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Commercial and newspaper printing plant executives will find constant use for this encyclopediac volume.

Size, 8½ in. by 11¼ in.; 918 pages include 4000 subjects listed in the index, 659 editorial illustrations, and other features.

Many new features included on photoengraving, typography, electrotypes, printing processes, paper, binding, mailing and photography.

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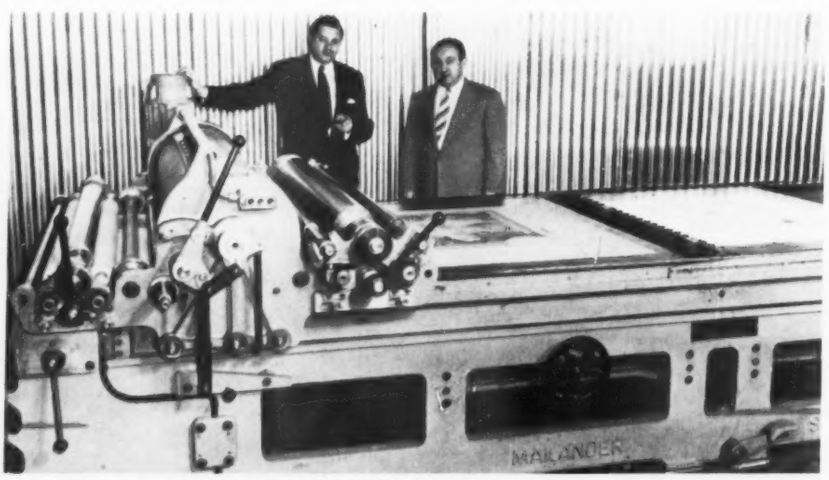
PRINTING EQUIPMENT Engineer
1276 W. 3rd St. Cleveland 13, O.

graphic supplies line and a staff will be available for service to Graphic Arts personnel, Recht said.

Pioneers of Industry Award has been given to Hubert S. Foster, Advertising Director of The Mead Sales Co. and The Mead Corp., for the last 20 years. For 52 years, Foster has been printer, photographer, editor, typographer, artist, designer, etcher, advertising writer and sales promotion expert in the paper and printing industry. The award is given annually by the Murrell Dobbins Vocational Technical School to a man or woman in the Philadelphia area who "through his own efforts, without benefit of inherited wealth or position, achieved leadership in crafts and industry."



Process Litho Arts of Chicago recently had installed a 42 in. by 58 in. Consolidated Mailander automatic Inking and Dampening Offset Proof Press, which measures 8 ft. by 17½ ft. and weighs over 16,000 lbs. Harold F. Dethlefsen (left), Pres. of Process Litho Arts, and Benjamin Sugarman, Pres. of Consolidate Intl. Equipment and Supply Co., are shown discussing the addition of two new Proof Presses. They went to Europe to negotiate purchase of several 56 in. by 76 in. Offset Proof Presses with Automatic Inking and Dampening. It is claimed that tests have proven that proofing of actual press plates is economical and saves the step of making proofing plates.

Dutro-Western Gear Rotary Printing Seminar

A seminar on forms printing and production run demonstrations of eight different Speed Flex rotary presses will be held August 9 to 20 inclusive in Los Angeles by Orville Dutro & Son, Inc., and Western Gear Works. Invitations have been sent to representatives of more than 2500 printing firms to attend the two week long program.

The presses will be in operation at Western Gear's Lynwood plant. In addition, demonstrations will also be held of the Speed Flex Collator and the Speed Flex ColorVerter, a paper coloring, slitting and rewinding machine. A feature of these demonstrations will be the printing of a tabloid size newspaper. The seminar portion of the program is to be held at the Dutro firm's downtown Los Angeles offices located at 117 W. 9th St.

Speed Flex presses are designed for the printing of business and office forms as well as publication printing. Typical of the presses to be exhibited during the seminar is the Model C Speed Flex press. This press is designed to print in one color and number and imprint in a second color on the face of the web or will print the face and imprint the back of the web in the same or a second color. Is also equipped for perforating both ways on the web, attaching carbon and for cutoffs at speeds up to 12,000 17 in. lengths per hr. or 17,000 8½ in. lengths per hr.

A National Safety Council Award was recently presented to the Chicago plant of the U. S. Government Printing Office in recognition of the plant's reduction in its accident rate. The plant personnel recently had participated in the Council's printing industry safety contest. Sam W. Kelley (left), Plant Mgr., is shown accepting the award from Fred Lube, staff representative.

John Williamson has been appointed to the sales service staff of Bensing Bros. and Deeney, and will represent the company in the Pittsburgh, Pa., area, it has been announced.

WILLIAMSON

PIA FEATURE

An attraction at the Printing Industry of America, Inc., Convention slated for Nov. 15-19 in Detroit's Hotel Statler, will be the PIA Printers' and Lithographers' Self Advertising Exhibition and Awards. Displayed at the convention will be 100 entries judged to be the Best Fifty advertising campaigns and the Best Fifty individual specimens. Awards will be $3,000 in cash, nine Benjamin Franklin statuettes, and honorable mention certificates. Best Fifty Certification will be given to all entries displayed at the convention. No entry fees are required, nor is it necessary to be a member of the Printing Industry of America to participate. The deadline for entries is Oct. 22. All desiring to enter the contest are asked to send for rules and entry forms either to a local PIA office or to Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh 33, Pa.

Southern Superintendent Succumbs — Finney T. Carter, 66, composing room superintendent of Norfolk (Va.) Newspapers, Inc., since 1948, died June 22 in his Belvedere, Va., residence. A member of the Intl. Typographical Union for 50 years, Carter had been a union representative for the last 10 years.

3M Contest Winners — R. V. Strickler, Department Supt. of the Jet Propulsion Laboratory, California Institute of Technology, has been awarded a 1954 Mercury automobile after having won a national offset plate contest sponsored by the Minnesota Mining & Mfg. Co. The second prize of $500 went to Albert Petrenas, Asst. General Mgr. of the Democrat Publishing Co., Colorado Springs, Colo. Contestants submitted entries explaining Why I Switched to 3M brand Photo Offset Plates. Ten honorable mention awards of $100 each went to: William J. Kotzwinkle of Intl. Salt Co., Scranton, Pa.; Andrew W. Coder of Kansas Farm Bureau, Manhattan, Kan.; Raymond J. Reichert of Bendix Radio Div., Baltimore, Md.; Sidney T. Clarke of the Steel Company of Canada, Hamilton, Ont.; Peter G. Dounis of Johns Hopkins University, Washington, D. C.; W. B. Onley, jr., of Texas Gas Transmission Corp.; Owensboro, Ky.; Willard R. Anders of 3420 S. E. Division St., Portland, Ore.; C. G. Eastman of Northern Ordnance Co., Minneapolis, Minn.; Edward Michel of M.S.I. Printing Co., Milwaukee, Wis., and E. Rosemary Kaye of Kayes Modern Duplicating, Fargo, N. D. Entries were judged by a committee headed by University of Minnesota Professors Thomas Barnhart, journalism, and Donald Woods, psychology.

The Chandler and Price Craftsman

37" Hand Clamp

POWER CUTTER

An up-to-date addition to the C&P line of power cutters, this new model extends the advantages of the hand clamp power cutter to the 37" size range. It sets a new standard of streamlined appearance and modern engineering development in the range of medium priced cutters. It features safety, ease and speed of operation, trouble-free "packaged power" and the highest standards of precision cutting.

The advantages of lower initial cost made possible by hand clamp construction do not subtract from the ultimate possibilities of this modern power cutter. *It can be converted to a completely automatic cutter at any time by the installation of our power clamping unit in place of the hand clamping device.*

Write for complete specification sheet.

THE CHANDLER AND PRICE COMPANY
6000 Carnegie Avenue • Cleveland 3, Ohio

Landau Joins Imperial — J. V. (Jack) Landau resigned as Sales Engineer and Manager of the Printing Equipment Div., Lake Erie Engineering Corp., Buffalo, to accept a position on June 1 with the Imperial Type Metal Co. Upon graduation from the Printing Department of the Carnegie Institute of Technology, Mr. Landau successively was engaged as Sales Engineer, Printing Plate Development, Econo Products, Inc., Rochester, N. Y., and for four years Sales Engineer and Sales Manager, Printing Plate Div., Jas. H. Matthews & Co., Pittsburgh. In 1944 he came to Lake Erie Engineering Corp. Landau is widely known in the Graphic Arts industry for his knowledge of platemaking.

LANDAU

Inspection Tour Held — Fifteen supervisors of the George F. McKiernan Printing Co., Chicago, made an inspection tour to Watervliet Paper Co., Watervliet, Mich., recently. The tour was conducted by Jack Bierwaltes of Carpenter Paper Co., and George F. McKiernan, jr., General Mgr.

Ink Div. Formed—Sun Chemical Corp. has consolidated seven of its divisions under the name of General Printing Ink Co., with headquarters in New York, N. Y., according to an announcement by Ralph C. Persons, Corporation Pres. It was also announced that James E. Slaughter, Vice Pres. of General Printing Ink Co., becomes General Mgr. of General Printing Ink Co., Eastern Div. The seven divisions, previously operated as separate entities, include: American Printing Ink Co., Chemical Color & Supply Co., Eagle Printing Ink Co., Fuchs & Lang Mfg. Co., E. J. Kelly Co., Sigmund Ullman Co., and General Printing Ink Co. (Gravure Div.).

Sanborn Succumbs — G. G. Sanborn, Asst. Vice Pres. of Tingue, Brown & Co., died April 30 in Colorado Springs, Colo. He was 64. As a representative of the organization for 27 years, Sanborn covered many United States areas. In 1942, he was appointed to manage the company mill in Atlanta, Ga.

Distributors Named—Sales Mgr. Arthur W. Haber of Peerless Photo Products, Inc., announced the addition of Brown's Business Machines Co., 4617 Dodge St., Omaha, Nebr., and J. Y. Hollingsworth Co., 1306 S. W. Washington St., Portland, Ore., as distributors for the organization.

Four Men Promoted — Ren R. Perry, Vice Pres.-Sales for Harris-Seybold Co., has announced that four men have been promoted to district managers. Robert G. Marquardt, Vice Pres. and General Sales Mgr. for seven years at American Type Founders, will head the new Southern Pacific District of Harris-Seybold Co., headquartered at Los Angeles. Joseph McConnaughey, jr., with the company since 1939 and Southern District Mgr. since 1950, will be manager of Harris-Seybold's Western District, with headquarters in Chicago. Replacing his as Southern District Mgr. is Herbert A. Asten, former Dallas Branch Mgr. and one time assistant superintendent of Dittler Brothers, Atlanta, Ga., where the Southern District is headquartered. Mc-Connaughey replaces C. A. Loefgren, now Asst. General Sales Mgr. To San Francisco, in charge of a new Northern Pacific Dis-

MARQUARDT McCONNAUGHEY

ASTEN BRANNIGAN

GREETINGS — *then shop talk*

Stereotypers who are shop bound eleven months in the year will travel far in vacation time to greet other stereotypers and talk shop . . . There is satisfaction in meeting men who wrestle with the same problems and devise answers that can be passed along . . . One or the other is apt to tell how troubles have been minimized by a change to dependable, fast working Certified Mats.

For dependable stereotyping, rely on Certified Mats

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CERTIFIED DRY MAT CORPORATION, 9 Rockefeller Plaza, Dept. M, New York 20, N. Y.

SOMETHING NEW HAS BEEN ADDED!

CASCADE CARBIDE GRAPHIC ART SAWS

LONG LIFE—SMOOTH CUTTING—EXACT KERFS

CHECK THESE ADVANTAGES

- Furnished in 6 point kerfs
- Exact eye and hole specifications
- Eliminates frequent saw changes
- Manufactured for any type machine
- Increased production
- Cuts down cost

As displayed at the ANPA Mechanical Conference in Atlantic City, N. J. June 7, 8, 9, 1954.

When ordering be sure and state diameter, eyesize, trimmer, hole size or send template of saw.

Cascade Stereotype Saws, Solid Carbide Router Bits, Solid Carbide Mohr Lino Saws

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Bottom Wrapper
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AUTOMATIC BUNDLER

Write for detailed information.
It will help increase the efficiency
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Reading the list of users of Wood Dry Mats conveys the impression that they are specified by the most discriminating.

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trict, goes James F. Brannigan, jr., former manager of Harris-Seybold's St. Louis, Mo., Branch. He also has been with the company since 1939.

ECKHARDT

H. T. Eckhardt, jr., will represent Miller Printing Machinery Co. in the southwest, according to an announcement by A. E. Searle, jr., Vice Pres. in Charge of Sales. Eckhardt is an alumnus of the Carnegie Tech Printing School, and has worked on the production of Miller advertising material. He will represent the company in Arkansas, Louisiana, Oklahoma and Texas.

Paul Resigns—Alexander Paul, Director of Management Services, Printing Industry of America, is resigning as of Aug. 1 to become Sales Mgr. of Dittler Brothers, Atlanta, Ga.

Executives to Switch—Gaylor Donnelley, Pres., R. R. Donnelley & Sons Co., has announced that Winfred R. Isom, Director of the Chicago Mfg. Div., will become Resident Mgr. of the company plant in Crawfordsville, Ind., and John E. Grice, current Crawfordsville manager, will assume Isom's title and duties in Chicago. Isom and Grice will continue as vice presidents of the company. Isom attended the University of Chicago and entered the company in 1926. He was graduated as a rotary pressman in 1933, and has served as Foreman and Supt. of the rotogravure dept., a departmental group supt., and Director of the Chicago Mfg. Div. In February, 1954, he became a vice president of the company. Isom is a former Director of the Gravure Research Assoc., Inc. Grice, who has been Resident Mgr. of the Crawfordsville plant since August, 1950, entered the company in 1935. He became manager of the operating dept. several years ago, and then was moved to Crawfordsville. Grice became a vice president in 1952. He is currently on the Board of Directors of the Book Manufacturers' Institute, Inc.

Wins International Award — George F. Motter (right), Pres. of George F. Motter's Sons, accepts a Natl. Advertising Agency Network's 1954 Creative Awards Competition citation from John R. Adams, Vice Pres. of The W. H. Long Co., Inc., in behalf of the NAAN. The award was for a display created by The W. H. Long Co., Inc., for George F. Motter's Sons. The display was exhibited at the Gravure Technical Assoc. Convention, held recently in New York, N. Y., with other entries from the United States and Canada in the Creative Awards Competition. Results of the Competition were announced recently in Boca Raton, Fla.

Clark Leasing Corp.—Officials of Clark Equipment Co. announced recently the formation of a subsidiary, Clark Leasing Corp., to finance leasing of its equipment on a national basis. W. E. Schirmer, Vice Pres., Clark Equipment Co., said that although the demand for leasing is relatively large, the company does not desire to offer leasing as a substitute for outright purchase. According to Schirmer, leasing enables a firm to retain working capital, to obtain materials handling industrial trucks for immediate use on a monthly expendable basis, eliminates the necessity for a firm's management to obtain a capital appropriation before equipment can be ordered, and to shop for low cost financing.

Pre-sensitized Offset Plate Plant—Completion of a specially designed plant for the manufacture of pre-sensitized offset plates in Hastings, Minn., has been announced by Minnesota Mining & Mfg. Co. Bert S. Cross, Vice Pres. of the firm's graphic products group, said the one story brick building contains 34,000 sq. ft. of manufacturing area and is equipped to prevent contamination of light sensitive photographic materials. This equipment

includes several air conditioning units with temperature, dust and humidity controls.

Sales Managers Appointed—Charles T. Pope, Exec. Vice Pres. of Heidelberg Eastern, Inc., has announced the appointment of Al Altemeier and William Morganson as sales managers for the Columbus, O., office. Altemeier will supervise sales in Ohio, western Pennsylvania and West Virginia. Morganson's territory includes Michigan, Indiana and Kentucky.

ALTEMEIER MORGANSON

PIA Web Offset Section Conf.—Problem analysis is the theme of the Second Professional Conf. of the Web Offset Section of Printing Industry of America, slated for July 8-9 in Chicago's Sheraton Hotel. The first meeting, a closed session for conferees, will be a work session devoted to uncovering problems of users of web offset equipment. Analytical questions drawn up at the meeting will be presented to a panel of suppliers, chairmaned by a member of the Web Offset Section, during the second meeting, for the purpose of discovering possible solutions to the problems. This session will be open both to conferees and invited suppliers. The third meeting, also limited to conferees, will feature a detailed discussion of all submitted problems and answers. The Section's Executive Committee will confer afterwards to discuss possible courses of action, which will be mailed to the submitters of the questions.

Executives Elevated — A number of mechanical executives of Norfolk (Va.) Newspapers, Inc., were recently promoted. James Hassinger, foreman of the Norfolk *Virginian-Pilot* pressroom, and formerly of the Pittsburgh (Pa.) *Press*, has been appointed Pressroom Supt. of Norfolk Newspapers, Inc. He succeeds Sidney Weiskittel recently appointed Pressroom Supt. of the Pittsburgh (Pa.) *Sun-Telegraph*. Weiskittel formerly was with the Cincinnati (O.) *Enquirer*. C. T. Balfour, Norfolk *Ledger-Dispatch* Stereotype Dept. Foreman, was promoted to general foreman of the stereotype department of both the *Virginian-Pilot* and the *Ledger-Dispatch*. Pressroom foreman for both papers is now J. D. Christian, former Asst. Pressroom Foreman of the *Virginian-Pilot*.

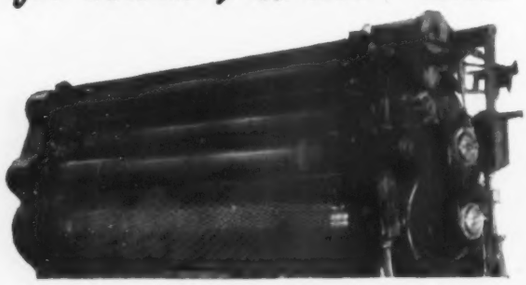
(l. to r.) Balfour, Weiskittel, Hassinger.

Hamel Elected — Frank A. Hamel, jr., Technical Director of Bensing Bros. & Deeney, has been elected Vice Pres. in Charge of Research for the firm. He is a graduate chemical engineer, and had been associated with Bensing Bros. & Deeney for four years prior to World War II. In 1946, Hamel joined E. I. du Pont de Nemours & Co. as an engineering group supervisor, and rejoined Bensing Bros. & Deeney in 1950. Also, he has recently been appointed the company's representative in the Technical Assoc. of the Pulp & Paper Industry.

Fairheller Named—John A. Fairheller has been appointed by officials of the William C. Herrick Ink Co., Inc., as the company's Middle Atlantic representative, according to an announcement by Vice Pres. M. C. Pintard. Fairheller's territory includes Maryland, Pennsylvania, Delaware, Virginia and Washington, D. C. He has over 10 years' experience in the Graphic Arts industry, including employment with the American Smelting & Refining Co., Federated Metals Div., where he specialized in type metal sales. He also was a salesman for Bingham Bros. Co. and R. H. Donnelly. Fairheller is a director of the Philadelphia Craftsmen Club and President of the Graphic Arts Owls. He is a graduate of the Charles Morris Price School of Advertising.

for low cost addition of third and fourth colors

for Miehle Flat Bed Presses



Western Printing Machinery's Extra Color Letterpress Unit for Miehle flat bed presses is the answer for low cost addition of third and fourth colors.

Precision built in several sizes, it will make a three or four color press of any standard 2-color Miehle flat bed. Production specifications are the same as the press to which it's permanently attached. Synchronization is perfect. Only minor changes are required for its installation.

This unit is low in cost and requires no additional floor space as it is mounted on top of the Miehle units. Operates efficiently and economically with the Miehle.

Write for further details.

WESTERN PRINTING MACHINERY CO.
3519 N. Spaulding Avenue
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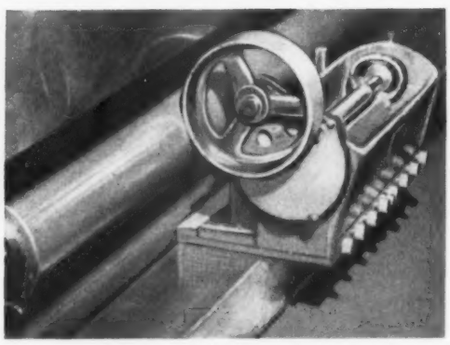
wpm

"CAPCO" Portable Ink Fountain

Installation on Hoe Late Model Press

Cleveland *Plain Dealer*



Weight — Approx. 30 lbs.

- Provides COLOR efficiently
- Increases production—affords pressroom savings up to 75%
- Saves time of pressmen—no costly installations
- Can be used on new or older equipment
- Easily operated and easily maintained

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New England Newspaper Supply Co.

Consolidated with

New England Fibre Blanket Co.

"The Oldest Name in Press Blankets"

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SOUTHWEST OFFICE:
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Eddie P. Gaughan

CHICAGO OFFICE:
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Chicago, Illinois
Scotty Campbell

WEST COAST OFFICE:
318 DeYoung Bldg.
San Francisco, California
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NEW ENGLAND NEWSPAPER SUPPLY CO.

Gardener G. DeMallie, General Manager

164 FREMONT STREET WORCESTER, MASSACHUSETTS

Modernize!

... Economize!

Cut Remelting Costs with the

NOLAN REMELTER

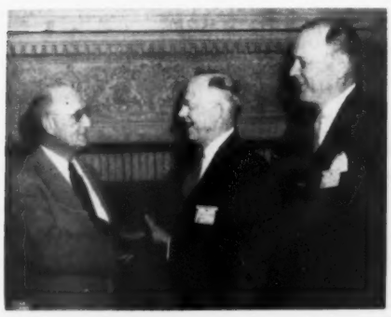
•

Saves Time
Saves Work
Saves Money
Saves Space
Saves Metal

Write For Bulletin

NOLAN *Corp.*, Rome, N.Y.

Kelly Wins Award — Eugene J. Kelly (left), Director of the Michigan Research Div., Sun Chemical Corp., is shown receiving the first L. A. Ault Award from



Dr. Harry L. Fisher (center), Pres., American Chemical Society. Looking on at the presentation, which was made during the recent annual meeting of the Natl. Assoc. of Printing Ink Makers in Chicago, is the award donor, Bronwell Ault (right). Kelly received the award "in recognition of distinguished contributions to the advancement of the printing ink industry."

Carnegie Booklet Distributed by NPEA —Information on the School of Printing Management at Carnegie Institute of Technology is presented in a 24 page booklet currently being distributed by the Education Committee of the National Printing Equipment Assoc. In addition to numerous illustrations showing various departments in the Printing School, the booklet contains complete descriptions of the courses being offered. Other parts deal with laboratory facilities available, firms employing Carnegie men, study programs offered, costs of a Carnegie education and activities offered at the college.

Richard L. Dawley, former assistant to Ken Cramer in the Cincinnati, O., territory of Ideal Roller & Mfg. Co., has been named manager of the company's Cleveland office, located at 14820 Detroit St., it was announced. Dawley has been associated with the company for several years.

DAWLEY

Printing Press Historian Speaks—Ralph Green (left), amateur printer and printing press historian, points to a picture of the Blaeu hand press of 1620. He is explaining its mechanism to Ira Pilliard (center), Librarian and Past Pres., and Win Brooks, President of the Milwaukee-Racine Craftsmen's Club. Green, who is a Structural Engineer for the Chicago Bridge and Iron Co., was the guest speaker at a recent meeting of the Milwaukee-Racine Club. He illustrated his talk on the development of the printing press with more than 60 drawings and photographs. Mr. Green is also the author of two books on printing press history in America.

Supply Corporation Formed — Tom Petronio of Magnet Sales announces that the company has been reorganized into Magnet Litho Supply Corp., with Petronio as president. Harold Erdrich and Jack Spano have been named vice presidents. Magnet Litho Supply Corp. will be distributors of supplies and equipment for the litho, offset and duplicator and letterpress fields. An illustrated catalog is available on request to Magnet Litho Supply Corp., 262 Mott St., New York 12, N. Y.

Bulletin on Mercury Relays

Ebert Plunger-type Mercury Relays are used in the printing industry in plant control, plant maintenance and new equipment applications, according to

FLATWRAP – FOLDWRAP – BANDWRAP
your magazine
the modern way!
45
TIMES FASTER
than
ENVELOPING
✓ Tighter
✓ Neater
✓ More Economical
Wrapper printing and labeling attachments optional
Write for Details
Magnacraft MFG. CO.
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Ebert Electronics Corp. Other applications of the relays are in alarm systems, call systems, furnace and oven controls, computor controls, motor controls, communications controls, standby power controls and temperature controls. Information, including electrical characteristics and ratings, on the UL Approved Standard and Heavy Duty Relays is presented in a two-color, four page bulletin issued by the company. Sponsor claims the relays are designed to handle current loads up to 60 amps. and motor loads up to 3 h.p. They are totally enclosed in hermetically sealed glass tubes for operation, according to sponsor, under all conditions including in dusty, moist and explosive atmosphere. Please refer to PEE No. 208 for a copy of this bulletin.

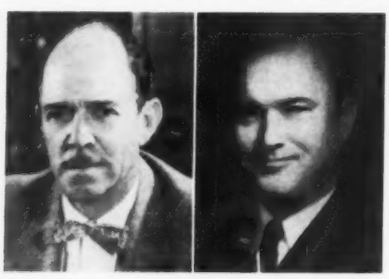
BOOTH'S ZINK CUT CEMENT
BEST for mounting cuts and solidifying type elements for standing ads. It mounts cuts quickly and holds them tighter. Used in printing plants all over the country. Get your order in now for a supply necessary for your needs.
Prices: 75c per tube, $6.00 per dozen in the United States.
E. A. BOOTH RUBBER CO.
2855 Scarboro Road
Cleveland Heights, Ohio
Phone: FAirmount 1-2384

Humbert Promoted – Robert J. Humbert has been elected treasurer of Bensing Bros. and Deeney. Humbert, company controller since 1949, is a graduate of New York University, a Certified Public Accountant in the State of New York, and a member of the Controllers' Institute of America, the Institute of Internal Auditors and the American Institute of Management. As chairman of the Cost Committee of the Natl. Assoc. of Printing Ink Makers in 1952, Humbert was largely responsible for developing a simplified cost accounting system for ink manufacturers. This was published as a 16-page book and adopted as standard procedure by the industry.

HUMBERT

Laidlaw Elected—Doug Laidlaw, Secy.-Treas., Los Angeles Lithograph Co., has been elected president of the Junior Printing Executives (Junior Printex) of Los Angeles, it was announced recently. The printing executives' group is an affiliate of Printing Industries Assoc., local trade group. Laidlaw succeeds Irl Korsen of Eureka Press. Other officers elected include Ray Prochnow of Superior Engraving Co., Vice Pres.; Jerald Rice, Production Planner of Western Lithograph Co., Secy., and Henry Marx, Production Expediter of Universal Printing and Lithograph Co. Membership in Junior Printex is composed of printing executives under 40 years old of firms affiliated with Printing Industries Assoc.

Heidelberg Executives Attend DRUPA –R. L. (Dick) Perry, co-owner of Heidelberg Western Sales Co., and Charles Pope, Exec. Vice Pres. of Heidelberg Eastern, Inc., attended the 1954 Intl. Printing & Paper Trade Fair (DRUPA) held recently in Dusseldorf, Germany. They also plan to visit Heidelberg factories at Gieslingen and Heidelberg, Germany, in addition to touring Graphic Arts industries in Switzerland, France, Italy and Spain. Other Heidelberg Eastern representatives at DRUPA were Charles Webber, Service Mgr., and Hermann Neumann, Sales Representative.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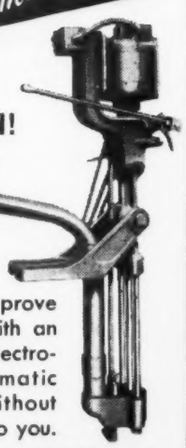
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O'Sullivan Appointed – Herbert O'Sullivan, printer and typographic expert, has been appointed Linofilm application specialist, according to a recent announcement by officials of the Mergenthaler Linotype Co. O'Sullivan was production Mgr. at the Gilcar Corporation, and was also a foreman at Kurt H. Volk, Inc., for 10 years.

O'SULLIVAN

Forms Importing Firm – Formation of Consolidated International Equipment & Supply Co. which will import, service and maintain imported European equipment for the Graphic Arts, has been announced by Benjamin Sugarman, President of Con-

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solidated Photo Engravers & Lithographers Equipment Co. A four story building containing 150,000 sq. ft. has been leased by the company on South Western Ave. in Chicago for the housing of exhibits, training and service installation, and storage of replacement parts and maintenance equipment.

Employees Honored — Several employees of the New London (Conn.) *Day* were honored recently for long service with the Day Publishing Co. at the annual banquet of the newspaper's 25-Year Club. Honorees included General Mgr. Orvin G. Andrews, Pressroom Foreman George W. Kent, and Composing Room Foreman Walter C. Crighton, each with 40 years' service; Sports Editor John DeGange, 30 years' service; Mrs. Eleanor S. Leather, national advertising clerk, 35 years' service, and Mrs. Margaret W. Stacy, proofreader, 25 years' service. Also honored was Francis H. Ham, typesetting machine operator, who recently retired after 42 years' service.

John N. (Paddy) O'Neill, technical engineer for Black-Clawson Intl., Ltd., London, recently spent two months in the United States to study converting equipment manufactured by the Dilts Machine Works, Div., Black-Clawson Co.

O'NEILL

James V. Porter has been named chief chemist for the Color Card Div., Colwell Press, Inc., according to Felton Colwell, Pres. Porter graduated from St. John's University with a B.S. in chemistry and received an M.S. degree in protective coatings from North State College. Before joining Colwell Press, he spent 15 years with Minnesota Paints, Inc., where he was senior chemist.

American Steel Chase Officers—Officials of the American Steel Chase Sales Corp. and American Steel Chase Co. announced recently the election of new officers. Harry L. Williamson and George E. Boucher are president and vice president, respectively, of the Sales Corp. Boucher and John D. Keenan, jr., are the respective president and vice president of the company. Williamson was first associated in 1926 with

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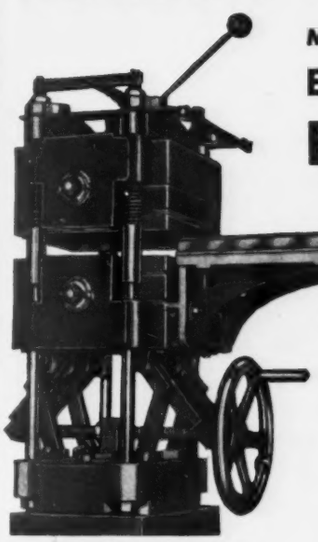

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the company, parent organization of the corporation, in the shipping department. He was elected an officer of that firm in 1943 and was instrumental in the growth of the retail sales department into a separate corporation in 1948. Boucher has been affiliated with the company in a sales capacity since 1925 and was elected an officer in 1934. He worked on the development of stereotype chases and other printing equipment. Keenan has been associated with the company since 1948.

Carmain in Europe—Leo Carmain, Production Mgr. of Herbick and Held Printing Co., Pittsburgh, Pa., attended DRUPA, the Intl. Printing Fair held recently in Dusseldorf, Germany, and visited printing plants in Germany, Switzerland, France, Sweden and England.

Sales Div. Changes—Announcement was made recently by R. G. Halvorsen, Vice Pres. in Charge of Sales for Hamilton Mfg. Co., of consolidation of the company's dental, surgical, drafting and printing equipment divisions into the Professional Equipment Div. According to Halvorsen, this division will have both a sales manager and a sales promotional manager. V. F. Hall, former Sales Mgr. of the Drafting Equipment Div., has been appointed Sales Mgr., and R. L. Perry, former Sales Mgr. of the Printing Equipment Div., has been named Sales Promotional Mgr. The company's central sales office now is under the direction of a sales coordinator, Robert T. Hoopes, formerly of the company's Home Appliance Div. Hoopes handles all sales office details previously handled by individual line sales departments.

R. L. Perry, former Sales Mgr. of Hamilton Mfg. Co.'s Drafting Equipment Div., is Sales Mgr. of the company's recently formed Professional Equipment Div.

HALL HOOPES

M. J. Hoover has been appointed Sales Director of Sun Chemical Corp., and a member of the corporation's management committee, it was announced recently by Pres. Ralph C. Persons. Since joining the corporation in 1936, Hoover has been general manager of a sales division. As Sales Director, Hoover will be responsible for the coordination of the activities of all Sun Chemical Corp. sales divisions.

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Richard T. Blair has been appointed to represent Sun Supply Corp., Div., Sun Chemical Corp., in Washington, D. C., Maryland and Virginia, according to a recent announcement by Corporation officials. Blair will specialize in the sales of lithographic supplies to government and commercial accounts. Former Sales Mgr. of James E. O'Donnel Co., Blair is a member of the Washington Litho Club.

BLAIR

Schmidt Now President—Carl R. Schmidt, Pres., Schmidt Lithographic Co., was elected president of the Lithographers Natl. Assoc. at its 49th Annual Conv. recently in White Sulphur Springs, W. Va. Schmidt, LNA Vice President for the last two years and a 20-year member of

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the Board of Directors, succeeds W. H. Walters of the U. S. Printing and Lithograph Co., who has been president for two years. A veteran of 54 years in the lithographic industry, Schmidt also is President of the San Francisco Employing Lithographers Assoc. His uncle, Max Schmidt, founder of Schmidt Lithographic Co., was president of LNA in 1915-1916. Other officers elected were Arthur R. Hitchings of Forbes Lithograph Mfg. Co., Vice President; L. E. Oswald of E. F. Schmidt Co., Treas.; W. Floyd Maxwell, LNA Exec. Director, and Edward D. Morris, Secy. Newly-elected Board of Directors members are Allerton H. Jeffries of Jeffries Banknote Co.; John H. Harland of John H. Harland Co., Richard N. Kauffman of H. S. Crocker Co., Inc.; Edward J. Chalifoux of Photopress, Inc.; Thomas Stevenson, jr., of Stevenson Photo Color Separation Co.; Hitchins, and Ernest E. Jones of Graphic Arts Corp. of Ohio.

Ogden Named Supt. — Appointment of Guy G. Ogden as Supt. of the Rochester, N. Y., printing division of the Todd Company, Inc., was announced recently by A. Richard Todd, Exec. Vice Pres. of the company. Ogden, who succeeds the late Joseph L. Connell, will be in charge of all printing and paper processing operations. He formerly was General Mgr. of the Globe Ticket Co. A graduate of the Wharton School of Business Administration at the University of Pennsylvania, Ogden is a member of the Manufacturing Div. Planning Council of the American Management Assoc.

OGDEN

Heidelberg Official Receives Press—An historical copper printing press, built between 1620 and 1650, was recently presented to Hubert H. A. Sternberg (left), Board Chairman of the Original Heidelberg factory in Germany. The presentation was made in recognition of Sternberg's efforts in connection with the Second Intl. DRUPA Exposition. Dr. Engst (right), DRUPA Committee Chairman, made the presentation.

McNally Dies—Andrew F. W. McNally, 67, chairman of the board of Rand, McNally & Co., died May 20 in Passavant Hospital, Chicago. Born in Chicago, McNally was a son of Frederick McNally and a grandson of Andrew McNally, a founder of the firm. McNally had been associated with the company since 907. He became its president in 1932 and was named chairman of the board in 1918. At that time, one of his sons, Andrew III, replaced him as president.

Graphic Arts Show Held in Southwest—It was estimated that several thousand printing plant executives and interested visitors attended the recent Southwestern Graphic Arts Exposition held in Houston, Tex., at the Shamrock Hotel. The most recent developments in equipment and supplies in the Graphic Arts industry were on display. U. S. Public Printer Raymond Blattenberger was on hand for the opening of the show. Five regional trade groups held their annual meetings concurrently with the Exposition. They included the Ninth District Craftmen's Conference, Southwestern Conference of Printing Pressmen and Asst.'s of North America, Southwestern Graphic Arts Management Conference, Southwestern Typographic Composition Assoc. and Southwestern Litho Clinic. Shown above are the officers of the Exposition who directed activities. From left to right: R. G. Montgomery, Director; John Thomas, Director; Arthur Wobler, Promotion Chairman; Mrs. Chloe Lee Mallett, Secretary, and Owner, Chloe Lee Mallett, Lithocopy, Houston; William H. Marting, President, and Owner, Standard Printing Co., Houston; Horace C. Wauson, Vice Pres.; O. K. Eden, Business Mgr., and Exec. Secy., Houston Graphic Arts Assoc.; Robert Miller, Director; and Robert O. Anderson, Treasurer, and Partner, Art Bookbinders, Houston.

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JULY 1954

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MELBURN O. SIMMONS, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

GEORGE GELL, Central District Advertising Representative, 1276 West Third St., Cleveland 13, Ohio. Phone Prospect 1-0088.

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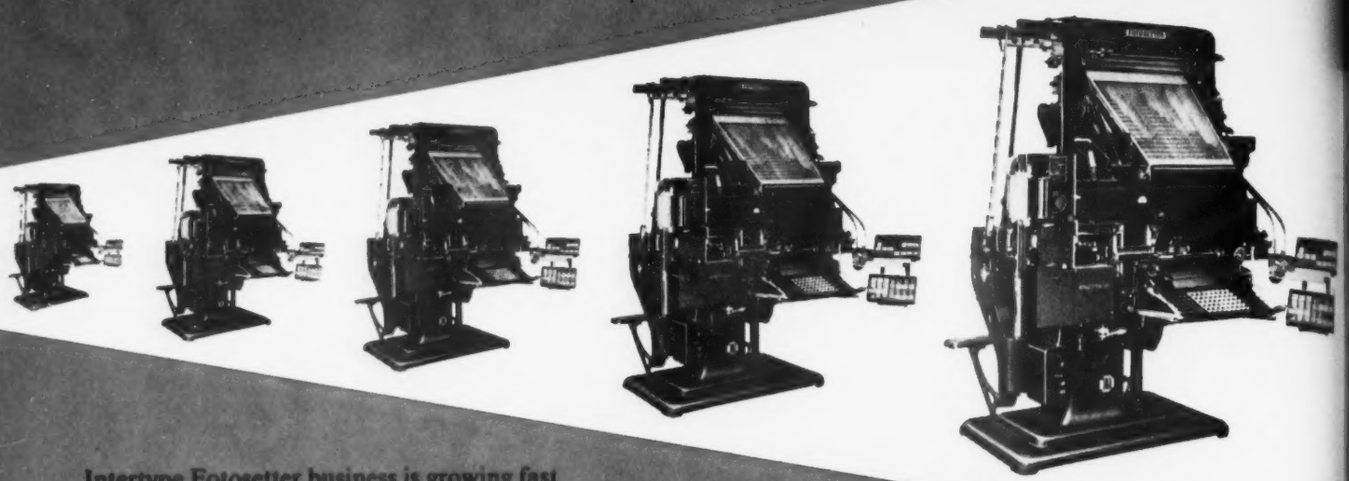

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